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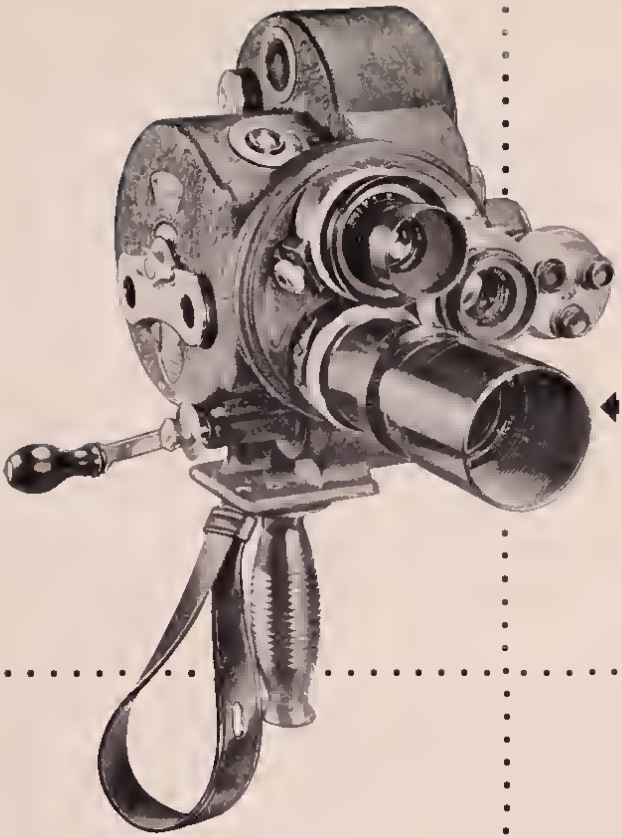

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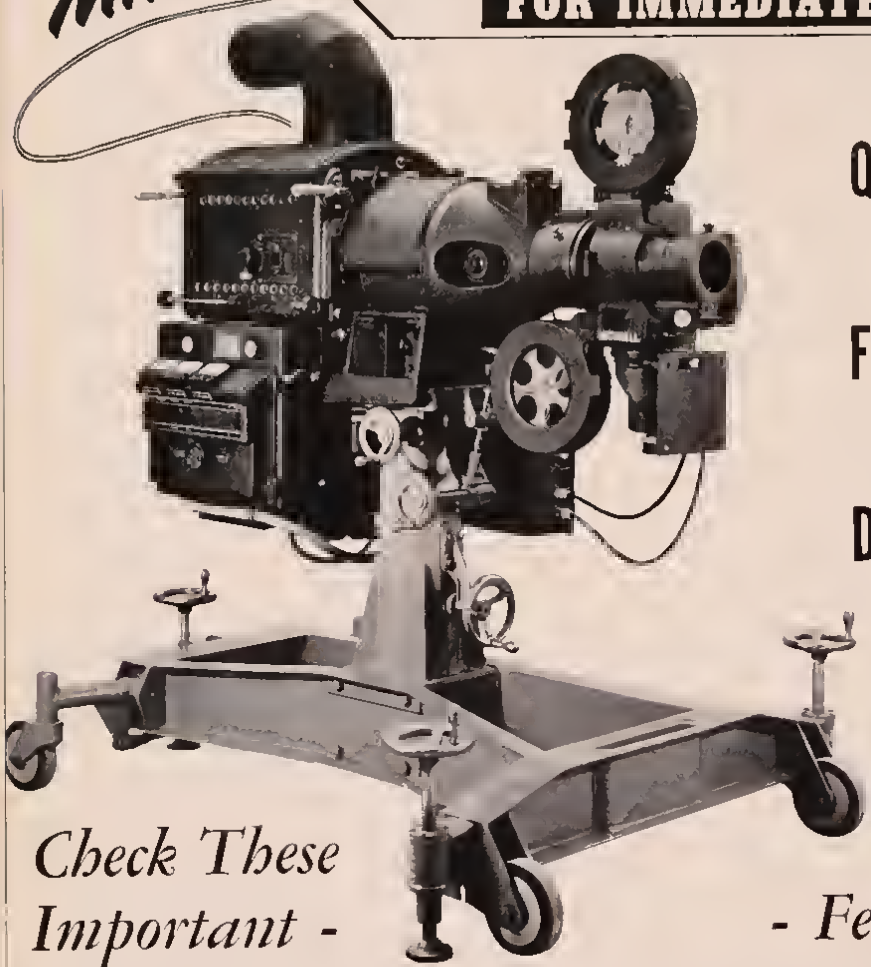

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 28 OCTOBER, 1947 NO. 10

CONTENTS

Aces of the Camera (Clyde DeVinna, A.S.C.)	By ROE FLEET	351
George Folsey, A.S.C., Introduces Reflected Light for "If Winter Comes"	By WALTER R. GREENE	352
The Men Behind the Mouse (Part 1—A Day at Disney's)	By HERB A. LIGHTMAN	354
Electronic Fire and Gas Light Effect	By HAROLD NYE	356
Future of Cinematography	By LEON SHAMROY, A.S.C.	358
The Cinema Workshop (16—Creative Cutting)	By CHARLES LORING	360
Historical Development of Sound Films (Part 4)	By EARL I. SPONABLE	362
How to Become an Amateur Cinematographer"	By CHARLES M. PETERS	364
Among the Movie Clubs		366
The S. E. I. Exposure Meter		370
So You Want to Add Sound to Your Movies?	By JAMES R. OSWALD	372
Profitable Business Develops from 16MM. Movie Hobby		375
Twenty Five Years Ago With A.S.C. Members		378
Current Assignments of A.S.C. Members		381

ON THE FRONT COVER—Initial production use of a helicopter plane, with special-designed vibrationless mount for the Mitchell camera, was for the RKO feature, "Your Red Wagon." Paul Ivano, A.S.C. handles the camera for long follow shot of stars Cathy O'Donnell and Farley Granger. Helicopter camera plane and method was described in September issue of AMERICAN CINEMATOGRAPHER.

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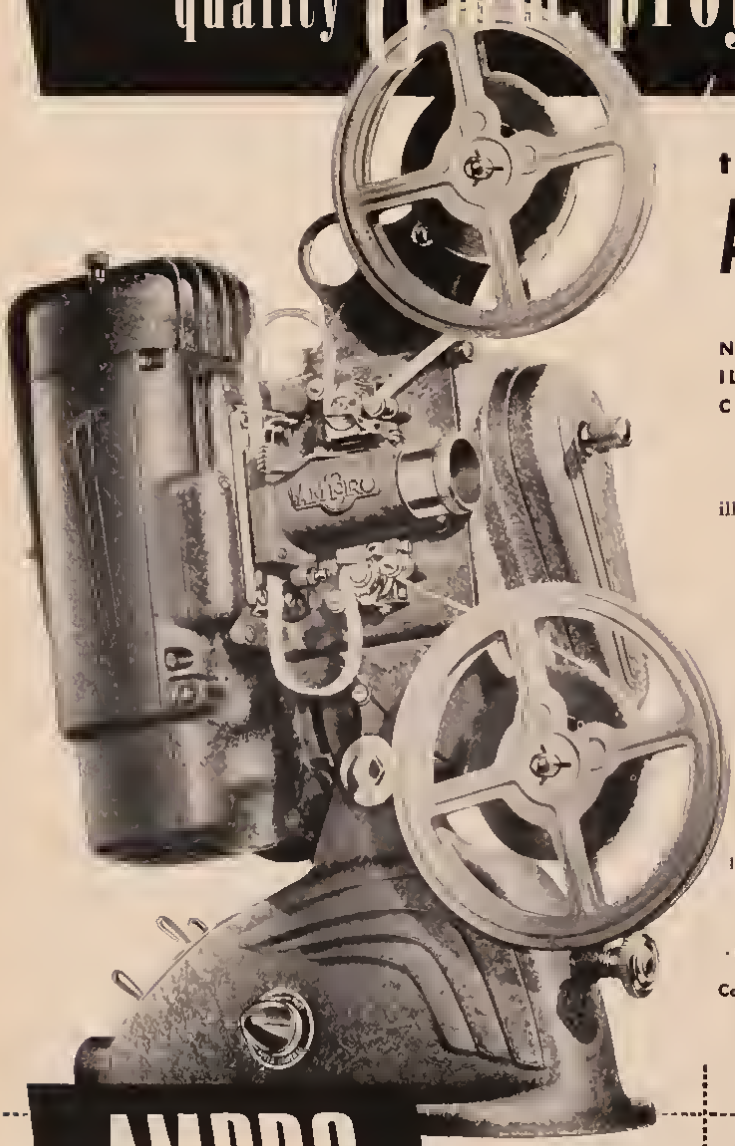

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ACES of the CAMERA

CLYDE DEVINNA, A. S. C.

By ROE FLEET

WHEN a Hollywood major studio decides to send a production unit on a long location trip outside of the United States, the first Director of Photography considered for the assignment is generally Clyde DeVinna, A S C

Since 1922, DeVinna has been a globe-trotting cinematographer on filming expeditions to all parts of the world, and in virtually every type of climate that exists—from within the Arctic Circle to Equatorial Africa, South America, Tahiti, and Indo China.

On such photographing expeditions, he was responsible for the camera work for some noteworthy productions, including White Shadows in the South Seas (for which he received the Academy Award for the Best Cinematography of 1928-29), Pagan Love Song," "Trader Horn," Last of the Pagans,' and "Eskimo"

Originally, photography was only a hobby with DeVinna. When he started a four-year stretch in the United States Navy in 1909 as a radio man, Clyde carried along a popular-priced still camera to snap pictures for his own amusement But when an old box-type 35 mm motion picture camera came through, DeVinna—with his complete knowledge of photography—was immediately drafted to hand crank the machine Aboard the USS California in 1911-1912, he was the first officially-designated Navy photographer—many years before the advent of rated photographers in the service, and shot the first films used for the Navy recruiting service During the Nicaraguan rebellion of 1912, Clyde was continually dodging bullets, as the rebellious natives figured the camera was some new type of machine gun

Following discharge from the Navy, DeVinna had a brief interlude as a news photographer for the San Francisco Examiner and the Los Angeles Tribune before going to Inceville, one of the principal film production centers around Los Angeles in 1914, on a radical experiment—planned publicity during production complete with photographs The trial period of six weeks blossomed into a full-time job- but, when a motion picture cameraman failed to show up one morning, Clyde was drafted to handle the photography for director Charles Swickard The latter was making two pictures simultaneously at the time—with Tsuru Aoki and Sessue Hayakawa as the individual stars Although Swickard had previously been known to change cameramen on each picture, Clyde stayed with him in the Ince organization for several years

Inceville, it might be pointed out, was a collection of open air stages and sets on the shores of the Pacific Ocean about 16 miles from Hollywood The mesa and rolling hills back of the studio provided excellent backgrounds for the westerns that formed a large portion of the Ince program for Mutual release With these condition applying, 90% of footage was of exterior nature which provided early basic and thorough training for DeVinna to become an exterior specialist in motion picture photography

Clyde's initial extended trip on a filming expedition was about 1922, when he accompanied director Raoul Walsh to Tahiti to make a House Peters starrer for the old Goldwyn Company This trip, by the way, was the first on which a portable film developing lab was taken along for negative processing on location Within two years, Irving Thalberg, then the producing head of Metro-Goldwyn-Mayer, engaged DeVinna to handle a photographic expedition to the Grand Canyon for several months, and this resulted in a permanent connection with MGM covering the next 18 years In 1926, he was again shipped off to Tahiti with a rather complete production unit to photograph the Ramon Novarro starrer, "Pagan Love Song," which resulted in a six months expedition Having experienced the advantages of a portable film processing laboratory several years before to the same location, a similar setup was operated under supervision of Wilson Leahy, A S C

The satisfactory results secured by MGM on the above picture in the Tahiti area, in sending along virtually a complete studio production unit to so distant a location, put the studio executives in a receptive frame of mind to shortly thereafter produce 'White Shadows in the South Seas' in the same locale So, less than a year later, Clyde was again off to the South Pacific to handle the camera work on

(Continued on Page 368)

GEORGE FOLSEY, A.S.C.

Introduces

REFLECTED LIGHT

for

"IF WINTER COMES"

By WALTER R. GREENE

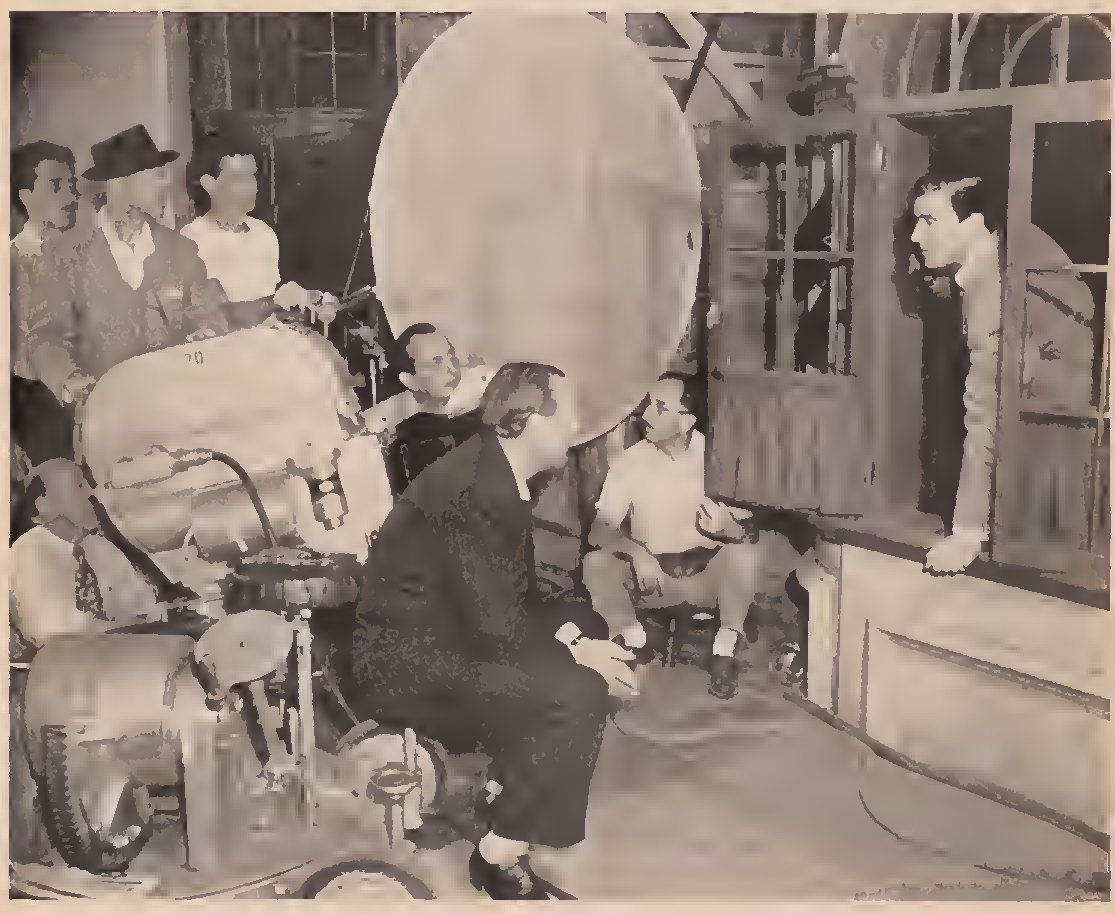
AN advanced photographic lighting technique by which soft and evenly reflected light gives extraordinary authenticity to interior sets, was recently developed and most successfully used by George Folsey, A.S.C., as Director of Photography on the Metro Goldwyn Mayer production of "If Winter Comes," a forthcoming release.

The photographer had previously used the reflected light principle on "Green Dolphin Street" for several scenes, but carried the idea to a greater extent for the photography on "If Winter Comes."

On the latter production, Folsey came to the decision that ordinary direct lighting would be entirely too contrasty for the interior sets, especially one with much important action and footage which had three dark sides, white ceiling, dark panels and a very black bookcase in the background, a ceiling piece, low camera set up, and actors wearing dark clothes.

Confronted with such a lighting problem Folsey—having demonstrated the feasibility of reflected light on "Green Dolphin Street"—decided to establish the method for the major photographing of "If Winter Comes."

(Continued on Page 380)



Walter Pidgeon in scene for "If Winter Comes" with Director of Photography George Folsey, A.S.C. standing at left (with hat) beside camera. A large silk reflecter is shown in center background, while another was at right in same position from which still was made.

Above and right—Production stills from the Metro-Goldwyn-Mayer production, "If Winter Comes." In upper left is a setup in the extremely dark set described by Director of Photography Folsey. At upper right advantage of reflected light for a large set with many people in the background is shown. On right, a good example of natural and rounded light in a small set.

Due to use of flash bulbs to make these stills fullest advantage of the reflected light method cannot be displayed.

Folsey in three different poses adjusting the silks for scenes in the production. At right, arc light projected onto the silk reflector and into the set, clearly demonstrates the technique.

THE MEN BEHIND THE MOUSE

PART 1. A DAY AT DISNEY'S

By HERB A. LIGHTMAN

WALKING through the gates of the Walt Disney Studios in Burbank, Calif., is like stepping into a wonderland the likes of which *Alice* never imagined It is another world

All around you are modernistic buildings painted in glowing tones of rust, tan and green The neatly tended lawns and shrubs add up to a landscape that Grant Wood might have painted The broad thoroughfares that lead from one streamlined building to another have storybook names like *Dopey Drive* and *Mickey Avenue* Here and there, cute girls in shorts and pigtails giggle and shout as they paddle ping pong balls over the net In a field nearby, a thundering herd of grown men, yelling and laughing like kids on a sandlot, gleefully chase a football about But it isn't just what you *see* that's different, it's what you *feel*

There's an atmosphere inside those gates that belongs more to the world of fantasy than to that of reality It grows on you After a few minutes you almost expect to see the *Seven Dwarfs* come swinging around a corner to the tune of 'Heigh Ho, Heigh Ho! It's Off to Work We Go! There's a kind of heartbeat to it, an undercurrent of excitement that seems to throb from within those brightly colored stucco walls

This is the home of Mickey Mouse and Pluto and Donald Duck This is the fun factory that spawned such visual delights as "Pinocchio," "Bambi," "Dumbo," the magnificent "Fantasia," "Make Mine Music," "Song of the South," "Fun and Fancy Free" This is the huge laboratory in which art and science are fused together onto brilliantly tinted strips of celluloid

Good Will Ambassadors

Characters like Mickey and Donald are the end product of all the brisk activity that goes on behind these gates They are the ambassadors of good will who dance across the screens of the world, singing and joking in a dozen different languages They are actually celluloid puppets—for it is the men behind the Mouse who pull the strings—writers, directors, artists and animators—the skilled technicians who breathe life and laughter into paint and celluloid so that a world of moviegoers may be entertained

These men are artists and scientists whose efforts, had they been directed into other channels, might have resulted in museum masterpieces or machines to harness the mighty atom Yet, by devoting their talents to making cartoon characters move on the screen, they actually perform a greater service to humanity in that they bring laughter to a world still sorely in need of escape from shabby reality

Mickey Mouse and even the belligerent Donald Duck are two of America's most able diplomats They succeed in promoting understanding between nations where top hatted ambassadors fail miserably They speak in a truly international language—the language of laughter—and what they say promotes friendship for the U S A Should anyone doubt this he need only inspect the hundreds of awards bestowed upon the Disney organization by a multitude of foreign countries

The Master Mind

The man behind the men behind the Mouse is Walt Disney, pioneer of animated cartoons, whose career reads like a chapter from a Horatio Alger novel

Born in Chicago, Ill., some forty-odd years ago, young Walt later moved with his family to a farm near Marceline, Mo.—where he attended a little country school, ran a paper route, and won prizes in local amateur contests for his impersonations of Charlie Chaplin

Drunk with his first taste of theatrical success, he teamed up with another boy to form a vaudeville act, but when the act got the hook, Walt gave up the stage and decided to become an artist His parents were somewhat less than enthusiastic over this decision, but a favorite aunt came to his rescue by providing him with pencils and drawing tablets

Later, at McKinley High School in Chicago, he became actively interested in drawing and photography, penning illustrations for the school paper and shooting his first motion picture with a secondhand camera which he bought At the same time, he studied cartooning in night classes at the Academy of Fine Arts

He graduated from high school just as America entered World War I A cool sixteen years old, he tried to enlist in every branch of the service, but was rejected by all of them because of his youth He finally talked his way into the American Red Cross as an ambulance driver and was sent to France where he startled both friend and foe with his unconventional ambulance Ever the artist, he covered his vehicle of mercy from stem to stern with original Disney cartoons

When the war was over, he returned to Kansas City and got his first art job (at the

(Left) A typical Walt Disney story conference. In the background is the "story board," looking like a large comic strip and containing sketches in sequence of each scene at high point of action That story board, for all practical purposes is the illustrated script of production (Center) The huge Multiplane camera an exclusive Disney development fills a two-story room and requires an operating crew of six men It adds three-dimensional depth to cartoon productions (Right) A corner of the vast Disney Paint Laboratory in which more than 2,000 hues of paint are produced A young lab assistant carefully mixes pigments from numbered bins

(Left) The atmosphere of Walt Disney's studio is more like that of a college campus than a conventional movie lot. Here, in front of the Animation Building located at the intersection of Mickey Avenue and Dopey Drive an informal group enjoys the sun during lunch hour. (Right) A section of the modernistic studio commissary where everyone from Walt Disney on down eats and chats in pleasant surroundings

staggering salary of $50.00 a month) with an advertising company, drawing sketches of such inspiring items as hog troughs, henhouses and horse drawn ploughs. He later teamed up with another aspiring young artist bearing the unbelievable name of Ubbe Iwerks, and they went to work for a company that made animated advertising films. At the same time he rigged up a studio in his garage where he conducted experiments in his spare time. These experiments led to his selling a short animated reel of Kansas City incidents to the owner of three large local theatres.

Inspired by this initial success, he gave up his job, enlarged his garage studio, and invited several eager young cartoonists to spend their evenings working on a new entertainment idea—the animation of fairy tales. Their first short subject was "Little Red Riding Hood"—but an even more important character, Mickey Mouse, was due to appear on the scene.

Walt had always liked mice. Their bright eyes and quick movements fascinated him. He used to catch them around the studio and keep them in a cage on his desk where he could study their antics. One of the creatures, a brazen sort of mouse with a whimsical personality, used to scamper all over his drawing board and watch him work with a critical eye. At first Walt called his little visitor Mortimer Mouse, but finally (after closer acquaintanceship with the jolly little rodent) he decided that Mickey Mouse was a more fitting name.

It was about this time that Disney decided to take his idea to Hollywood. He arrived in the movie capital (then a thriving orange grove) with a two year-old suit of clothes, his drawing tools, $40.00 in cash, a print of his latest picture, and a world of enthusiasm.

Hollywood's Cold Shoulder

Hollywood, however, was somewhat less than enchanted by the idea of animated cartoons. Walt and his brother Roy (now financial wizard of the Disney interests) tramped the stardusty streets for months—cooking, eating and sleeping in one room—and getting the best doors in Hollywood slammed in their faces. When things got so black that even *bare ksrs* looked good, an order came through from an independent distributor in New York for a series of animated cartoons.

The brothers Disney converted a dark little room in the back of a real estate office into a studio, sent for Ubbe Iwerks in Kansas City, hired two girl assistants (one of whom Walt later married) and began a feverish schedule of drawing and filming.

Their first production was "Alice in Cartoonland," which was followed by a series starring "Oswald the Rabbit." Walt felt the need to develop a new character and he wracked his brain without causing any cerebral storms. Then, while crossing the continent on a train, he happened to think of the jolly little rodent who used to play hop scotch on his drawing board. Mickey Mouse! That was the answer!

The first three Mickey Mouse shorts failed to cause much stir in the movie world because the industry was, at that moment, up in the air over a revolutionary new development—the talking picture. Walt tried to interest several companies in synchronizing sound to his Mickey Mouse cartoons—but nobody ever heard of cartoons with sound, so there were no takers. Finally, in desperation, Walt and his brother scraped together a bit of money and decided to record and release the film themselves.

The rest, as biographers always say, belongs to history. Mickey Mouse made a sensational hit with the public. Disney's studios grew by leaps and bounds. He hired the best artists he could find and then set up his own school to train animators especially for cartoon production. The payroll expanded to include hundreds of new employees, a research department and music library became part of the set-up.

Through it all Disney kept his feet on the ground, even though his imagination continued to soar in the clouds. He worked for progress in cinematic science, took chances on new and untried techniques, molded the animated cartoon into a potent medium of art and entertainment.

He has always placed progress ahead of money, sinking his entire capital into a project which he believed in, even though others scoffed at his foolhardiness. The industry said he was crazy when in 1937 he produced "Snow White and the Seven Dwarfs," the first feature-length cartoon. But "Snow White" made millions and signalled the birth of a fascinating new form of screen entertainment.

The screen and science have both profited from the new devices and techniques perfected by Disney and his associates. The miraculous Multiplane camera, which gives three dimensional depth to cartoon compositions, is one of the more important achievements. The blending of live action with cartoon characters in the same scene—first introduced in "The Three Caballeros" (1945) and reaching its highest degree of perfection in "Song of the South" (1947)—is another major step forward in cinematic progress.

The Magic City

By 1938, the mushrooming Disney organization had outgrown its Hyperion Studios. Much of its equipment had become obsolete and there was an urgent need for space and more space.

It was then that a large tract of land in Burbank, not far from the Warner Bros. Studios, was purchased and plans were drawn up for what was to be the most modern and functional cartoon studio in the world. Walt and his brain trust worked closely with the architects to make sure that the new studios would be, not only beautiful to the eye, but conducive to the highest quality of production in the constantly expanding field of cartoon animation.

The result is a kind of dream studio, a magic city all in itself—the very last word in pleasant and productive working surroundings. Here everything is attractive, designed to inspire the creative instincts of artists—and it is so well planned that there is very little waste of time or motion in getting the job done.

The first consideration in planning was to provide a smooth and efficient sort of motion picture assembly line. The Animation Building is the beginning of the line. In it are located offices of the Story Department, Directors, Layout Men, Animators and Inbetweeners. Across the street from the Animation Building, and connected with it by an underground all-

(Continued on Page 377)

ELECTRONIC FIRE AND GAS LIGHT EFFECT

By HAROLD. NYE

(Warner Brothers Studios, Burbank, Calif.)

(This paper was presented by the author at the October, 1946 convention of the Society of Motion Picture Engineers in Hollywood, and published in the April, 1947 issue of SMPE Journal. It is reprinted by special permission.)

When photographing motion picture sets using gas light brackets, it has been common practice to conceal a 50- or 100-w projection lamp back of each shade to reinforce the light from the gas flame, as the flame itself does not produce enough light for satisfactory photographic results. These lamps are usually controlled by means of a flasher and dimmer combination to simulate the flicker of the gas flame on the wall, as shown in Fig. 1. The results obtained are more or less mechanical and require the constant attention of an operator.

Some time ago we received a request from the Decorative Lighting Department to develop an automatic control for these lights that would make them synchronize exactly with the flicker of the gas flame. If the gas light is turned up, or turned down or out, the reinforcing light must follow the action faithfully as well as producing the flicker, and it must do this without any manual operations.

This was accomplished with a simple electronic control in the following manner. The light from the gas flame in the bracket was picked up with a photocell attached to the back of the bracket shade and concealed from the camera (Fig. 2). The photocell was connected in a phase shift circuit which controlled the grid of a thyratron tube. The lamps that produce the reinforcing light were connected in the anode circuit of the tube and the light produced could be made directly proportional to the amount of light picked up by the photocell. The cell was enclosed in a metal shield with a tubular window so arranged that it could pick up the light from the tip of the gas flame and not be affected by the normal set lighting.

The thyratron unit controls the current through the lamp. The light reproduced on the gall was a very faithful reproduction of the gas flame flicker and the lag in response could not be detected. The circuit, with the omission of protective devices, is shown in Fig. 3.

The thyratron employed was an *FG 105*,

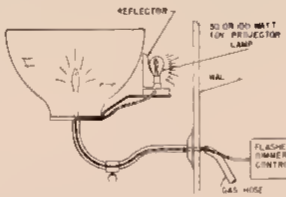


Fig. 1. Method ordinarily used for concealing a small projection lamp back of a gas bracket to reinforce the light produced by gas flame.

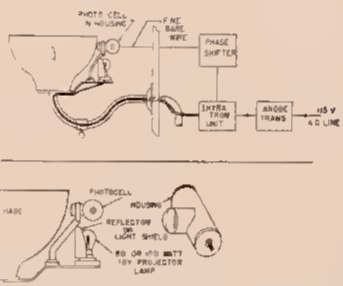


Fig. 2. An electronic circuit is added to modulate the projection lamp to simulate gas flame flicker.

which is a shield grid type and is rated at 6.4 average amp, and it will take care of the requirements of the average set to be photographed in black and white. *T2* is the anode transformer which must be capable of carrying the entire lamp load. *T1* is the grid transformer which handles very little power. *P1* is a potentiometer connected across the secondary of the grid transformer and serves as the sensitivity control.

The section *AB* of this potentiometer, the secondary of the anode transformer, the capacitor *C*, and the photocell, form a resistance-capacitance phase shift bridge in which the photocell serves as the resistive element. This bridge controls the phase angle of the grid voltage relative to the anode voltage. The phase angle of the grid voltage determines the amount of current that flows through the thyratron and the load.

The sensitivity control is adjusted so that when no light strikes the cell the grid voltage is about 180 deg. out of phase with the anode voltage and the tube does not conduct. Small increments of light on the photocell decrease the angle by which the grid voltage is displaced from the anode voltage, and the tube starts to conduct. When there is sufficient light on the cell, the grid and anode voltage are practically in phase and the thyratron conducts maximum.

The photocell used was a 922, which is a vacuum cartridge type. This particular cell was selected because it could be mounted in a small housing.

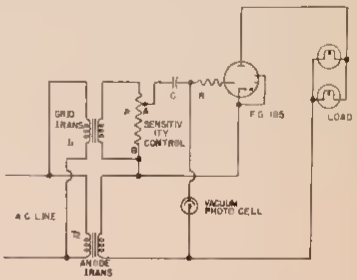


Fig. 3. Half-wave electronic circuit for modulation incandescent lights.

The capacitor *C* is in the neighborhood of 0.0003*uf*. The grid circuit is a high impedance circuit and should be properly shielded. *R1* is the grid resistor used for the protection of the thyratron grid.

The sensitivity control is the only adjustment in the circuit. With this control the lights can be phased full on, off or the photocell can be given any desired amount of control, *i.e.*, the flicker can be made violent or barely perceptible. The rate of flicker, of course, depends on the flicker of the gas flame. All the operator has to do is to adjust the sensitivity control until the flicker looks natural to the eye. Any operator can run the equipment with a few minutes instruction.

The characteristics of mercury thyratrons vary slightly until they reach their operating temperature and some adjustment of the sensitivity control may be necessary for the first half hour, but after the tube has heated sufficiently, no further attention is required from the operator.

A five-minute delay relay is required to delay the application of the anode voltage until the cathode has reached its operating temperature. This relay, switches, fuses, and pilot lights are omitted from Fig. 3.

A photograph of the original equipment as used is shown in Fig. 4.

Fig. 4. Equipment used for electronic flicker effect.

A is the photocell in a metal housing set so it will pick up the flickering light from the gas flame No optical system is used Since one photocell terminal is common with one of the power lines to the lamp it is necessary only to run one lead from the photocell to the thyratron grid circuit Trouble was encountered when we tried to cable this lead along with the power leads, even though it was shielded, but bare wire can be used if it is kept away from the power leads A piece of No 38 bare copper wire run from the sensitive side of the photocell to a pin driven through the wall serves as this lead and it is so fine that it will not photograph. A lead fastened to the other end of the pin on the back of the set connects to the grid post on top of the thyratron unit which is in the center of the picture

The pilot light *B* indicates that the filament is turned on The pilot *C* lights when the time delay relay has applied the anode voltage The pilot *D* is connected across the load and permits the operator to observe the flicker being produced even though he is not in a position to see the lights on the set *E* is the sensitivity control, *F* is the anode fuse compartment *G* is the filament fuse, *H* is an external cathode connection which is not used in this setup, and *J* is a ground connection It is not necessary that the equipment be grounded as no interference is created with the sound recording equipment

The unit on the right of Fig 4 contains the anode transformer The unit shown has a variac and voltmeter built into it and while not absolutely essential it is convenient to be able to raise the anode voltage somewhat above normal when the maximum light picked up by the photocell is insufficient to produce a 180 deg phase shift of grid voltage

In some long shots we connect as many as ten bracket lights to one of these electronic units The fact that all of the lights are controlled from one flame is not obvious in a long shot

Small lighting units such as Dinky Inkies or Baby Juniors are also controlled by these units when it is desired to have the light flicker over some local area

Light sources of 250 w or less respond to the flicker modulation better than the larger units because the thermal inertia of large lamp filaments filter out much of the highest frequency component of the flicker Photoflood lamps of the same wattage produce better results than the regular projection lamps

Gas flames are usually used in fireplaces on motion picture sets and here again it is necessary that the light produced be augmented with a flickering incandescent light source in order to produce sufficient light to photograph satisfactorily The unit just described is ideal for controlling these lights when not more than 750 w are required This wattage is ample for the ordinary fireplace to be photographed in black and white When used for a fireplace effect, the photoelectric pickup is made from a gas pilot flame located off stage

When more than 750 w are required, two setups like the one just described may be used or a full-wave unit consisting of two thyratrons may be used A full wave circuit is shown in Fig 5

This circuit operates on the same principle as the one shown in Fig 3 A vacuum tube

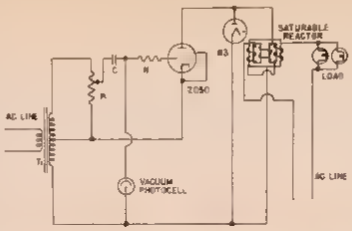


Fig 5 Full-wave flicker and fire effect

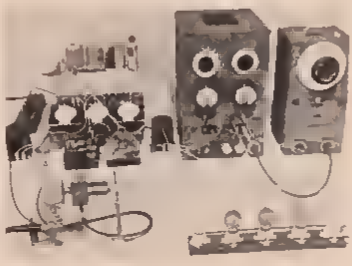


Fig 6 Laboratory setup of full-wave flicker and fire effect

and an interstage transformer have been added to the circuit so that the voltage applied to the grids of the two thyratrons are 180 deg out of phase with each other The anode transformer must have a center tapped secondary and although batteries are shown in Fig 5, a power supply was actually used Fig 6 shows a laboratory setup of this circuit The gas burner *A* and the photocell housing *B* are similar to the pickup system used for a fireplace effect The equipment shown at *C* is a bread board setup of the control circuit *D* is a full wave thyratron unit, *E* is the anode transformer and variac, and *F* is a lamp bank of photofloods which serve as a load This setup has been tested for some time in the laboratory and appears to operate very satisfactorily but it has not been built up for use on production

The gas burner should be in a chimney so that is can create its own draft and be independent of drafts that exist on the stage The air holes for the burner should be properly located and be made adjustable so that any amount of flicker can be produced

If, for any reason, it is not possible to place the photocell close to the gas flame the cell may be located several feet away and the image of the flame can be focused on the cell with a simple optical system

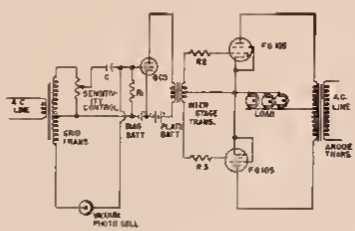


Fig 7 Electronic fire effect utilizing a saturable reactor

Electronically controlled saturable reactors can be used for fireplace effects, but they are not so satisfactory as the circuits already described The circuit for such a unit is shown in Fig 7 The grid circuit of the *2050* thyratrons is the same as that shown in Fig 3 The saturable reactor has a capacity of 500 va and the direct current winding can saturate the core with about 100 mils flowing through it The tube load is highly reactive and the *83* tube forms a path for the current because of the collapse of the direct current field With this "free wheeling" circuit it is necessary that only one tube be grid controlled

The only advantage of this circuit is that small tubes are used and it is cheaper to build The disadvantage is its slow response caused by the lag in the reactor With a well designed saturable reactor, no larger than 500 va capacity, it is possible to produce a fair fireplace effect

Some experiments have been conducted using ignitrons to control heavy loads such as might be used for large fires, but these experiments have not progressed far enough to reach any definite conclusions

We have been using some of these electronic fire and flicker effects for about a year and the results have been very satisfactory

New Day; Light Printer For 16 MM. Market

Made specifically for the 16 mm and 8 mm film field, the Day Light printer, a modern-designed piece of film processing equipment is now being manufactured by Leo J Streeter and his associates at their own plant in Burbank, Calif

"The name Day Light Printer most aptly describes this new piece of equipment," Streeter states, "in that it is operated completely in day light—the dark room is used only for loading the magazines

We found that, by eliminating many unnecessary parts, we could condense the machine but still retaining the same high quality of work at a speed that would permit the finest prints obtainable Our machine still gets better than 2 000 feet per hour," Streeter continued, "and with the pre-set lighting arrangement, a new departure is introduced in the construction of a film printer The plant is now in operation, and while we will not reach capacity this year, enough machines will be on the production line to meet normal demand for early deliveries

More than two years time went into the final experimentation and testing of the printer before it was placed on the market, according to company announcement Street has been associated with the film industry for a quarter century, most of which time he specialized in the 16 mm field as a sound engineer and production executive, and is credited with producing the initial 16 mm sound recorder many years ago

A major asset of the Day Light Printer, Streeter observes is the simplicity of design and flexibility of design allows for instant change-over from 16 mm to 8 mm printing This feature will undoubtedly find favor with many large business organizations planning to establish their own motion picture departments

FUTURE OF CINEMATOGRAPHY

by LEON SHAMROY, A.S.C.

(This article was prepared by the author for the Pictures of Tomorrow edition of the Film Daily, September 10, 1947 and reprinted because of its pertinent and far-reaching analysis of motion picture photography and future developments.)

The motion picture industry has more than its share of skeptics and critics It has always been that way Twenty years ago, when pictures were on the verge of talking, they protested "We've gone as far as we can go."

Despite the loud wailings, impossible dreams have become technological practicalities Pictures talk and live in vivid colors New dimensions of realism have been added

The critics have had their innings With the advent of sound, they proclaimed the art of the motion picture dead Sound could never be accepted as a substitute for the talents of the pantomimist But the so-called death of an art proved to be a rebirth

The stature of the motion picture as an art has grown and with it the art of the cinematographer For many years, the men behind the camera have sought to erase the popular conception that they are something more than mechanics who point cameras and get the picture every time

A director of cinematography makes something more than a technical contribution to a motion picture What the writer has created in written word must be translated to the screen through the eyes and minds of director and cinematographer

A close working relationship must exist between director and cinematographer if the fullest dramatic possibilities are to be realized graphically With the proper lighting, a mood can be established, an emotion emphasized, and realism heightened

The trend toward realism, however, has put many a cameraman in the position of a tightrope walker While called upon to inject realism, he knows that to millions of theatregoers, the motion picture is a welcome escape from the everyday trials and tribulations The basis of this escape is bound up in the illusion of the medium To destroy this illusion with ultra-realism can mean jeopardizing large investments The cinematographer frequently finds himself in the awkward and unhappy position of serving two masters The critics then scream, 'Art is being compromised But is it? While it's the direct responsibility of the cameraman to guarantee the investment of the film industry, indirectly he feels a responsibility to those millions who look to the screen for that intangible something Call it entertainment, escape from tortuous reality, relief from domestic worry But whatever name is put upon the appeal, the underlying illusion must be preserved And so the people must be pleased The cameraman must make their heroines as they prefer them, young and beautiful, complete with smooth silken complexions, make the heroes youthful, handsome and virile

Even though fettered by economic restrictions imposed upon him by the public taste, the creative cinematographer continues to experiment He looks for new ways of intensifying mood and projecting the emotions of the actor beyond the screen to the audience The limitless pallet of color points the way to new avenues of photographic expression

In the face of contemporary skeptics, the imagination of cinematographers are stimulated by new engineering developments that loom on the horizon Not too far off is the "electronic camera" A compact, light weight box no larger than a brownie kodak, will contain a highly sensitive pickup tube, 100 times faster than present day film A single lens system adjusting to any focal length smoothly by merely turning a knob, will replace the cumbersome interchangeable lenses of today Cranes and dollies weighing tons will be replaced by lightweight perambulators The camera will be linked to the film recorder by coaxial cable or radio The actual recording of the scene on film will take place at a remote station, under ideal conditions Instead of waiting for a day or days, as is the case with color, electronic monitor screens connected into the system will make it possible to view the scene as it is being recorded Control of contrast and color will be possible before development

It is not too difficult to predict the effect of such advancements on the production of motion pictures Economically, it will mean savings in time and material Since the photographic results will be known immediately, it will be unnecessary to tie up actors and stage space for long periods of time The size and sensitivity of the new camera will make photography possible under ordinary conditions of light Shooting pictures on location will be simplified Generators, lighting units, and other heavy equipment will be eliminated, thus doing away with costly transportation

In terms of cinematographic art, it will be placing a more refined instrument in the hands of the cameraman an instrument of great sensitivity and mobility

Do you hear the skeptics shouting IMPOSSIBLE'?

JOE AUGUST, A.S.C.

The motion picture industry lost one of its foremost Directors of Photography and the American Society of Cinematographers lost one of its original charter members, with the sudden passing of Joe August, A. S. C., on September 25th, from a heart attack.

At the time of his death, he was photographing "Portrait of Jennie," starring Jennifer Jones and Joseph Cotten, for David O. Selznick. Feeling ill on the set, he went to the production office at the studio, where he collapsed. Funeral services were held on September 29th at the Moeller, Murphy, Moeller mortuary in Santa Monica, with interment following at Inglewood Cemetery. A large delegation of officers and members of the A. S. C., besides producers, studio executives, directors and stars, attended the services. He is survived by his widow and one son, Joseph August, Jr., who was an assistant cameraman on the production

August was an early pioneer in motion picture photography. Born April 26, 1890, in Idaho Springs, Colo.; he was educated in Colorado School of Mines and started in the motion picture industry as an assistant cameraman with the Thomas Ince organization in 1911. Within a year, he was promoted to post of first cameraman, and initial picture was "The Lure of the Violin." After four years with directors J. Hunt and Richard Stanton, he joined William S. Hart as chief cameraman, and remained with the latter for six years.

After a brief interlude at Metro, August joined the Fox camera staff, and was Director of Photography on numerous top productions for a number of years. Moving over to RKO, for another long term, he photographed the outstanding features of that studio, most noted being "The Informer." In 1941, before hostilities started, he entered the armed services as a Commander in the U. S. Navy. He served overseas in Iceland and the Pacific, and acquitted himself notably in the documenting of "Battle of Midway." Out of service two years ago, he was Director of Photography on MGM's "They Were Expendable," and then signed a term contract with David O. Selznick

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16. Creative Cutting

By CHARLES LORING

IN the preceding chapter, we discussed the preliminary steps in the editing process. We are now ready to take up the actual mechanics of editing as well as the subtleties of creative cutting which make the difference between a well-cut and a poorly-cut picture.

Let us say that you have made a complete breakdown of your footage as it arrives from the laboratory. You now have your scenes (each designated by its *continuity number*) set up in consecutive order on a peg-board or pigeon-hole tray. You have decided, through reference to the script and your three by five scene record cards, that this is the order in which you will want your scenes to appear in the final cut.

The Rough Cut

Your next step is to *rough cut* your footage, one sequence at a time. Starting with the first or A sequence you now cut the slate off of Scene 1 and hang it on peg No. 1 on your editing-bin rack. These pegs are actually small nails with the heads cut off, mounted along a horizontal rack suspended over a rectangular bin lined with soft white muslin. The pegs are designated by painted numbers running consecutively from 1 to 50, or 100, depending upon the size of the bin.

You now proceed to mount each scene of the sequence on its respectively numbered peg. When you reach the end of Sequence 'A,' splice all of the scenes together in order. Now you can either rough cut the rest of the sequences, or screen Sequence 'A' preliminary to final cutting of that sequence. Many editors prefer to join all of the rough-cut sequences together before doing any final cutting, so that they can get an idea of the flow of the entire production.

The rough-cut sequence contains all of the *overlap* action you have included to bridge continuity from one scene to another, and which will be eliminated in the final cutting. Also the action in these scenes will seem to run over-long because it is unrelieved by the variety of scenes which will later be *inter cut* to speed up the pace.

In screening the rough-cut sequence, there are a few basic editing axioms to be considered. Firstly, your main objective in cutting is to create a smoothly flowing story that will hold the audience's attention by virtue of having its dramatic emphasis in the right places. Secondly, two scenes taken separately will have two separate meanings—but when they are joined together consecutively an entirely new meaning rises out of the relationship. For example, you may have a shot of an airplane flying and another shot of a man looking up at the sky. If you join these two scenes together, your audience will assume that the man is looking up at the airplane.

Thirdly in final cutting you will be concerned with three important elements: *continuity*, *tempo* and *dramatic punch*. It is these factors which you will want to keep firmly in mind when screening the rough cut of your sequences. Watch, first of all, to see how you must cut your footage so that each scene will flow smoothly into the next. If there is a jump in continuity, decide which type of optical transition will best bridge the gap.

Next, notice the pace of the action in individual scenes and decide where you will want the general tempo speeded up or slowed down in the final cutting.

Then notice which scenes contain your climactic action, the situations which must be built up to give your screen story *dramatic punch*.

Cutting for Continuity

In simplest terms, continuity in cutting means a smooth flow of story action from scene to scene and sequence to sequence. Actually, as we have pointed out before, continuity originates in the script and is enhanced by proper direction of the action. With this firm basis it is a simple matter for the cutter to put together a smoothly flowing screen story from the footage at hand. But, it is a mistake to believe that good continuity can be *manufactured* in the cutting room from poorly matched, disjointed scenes.

Good continuity implies that cutting should be so smooth that the audience will not be conscious of changes of angle or image size as the camera changes its point-of-view. Thus, in cutting continuous action the *overlap* (or repetition of action at the beginning of a new scene) must be cut at a point where the action will continue to flow uninterruptedly. Sometimes it is a simple matter to locate this point, at other times you will have to experiment.

A natural pause in the action is usually a good place to cut, picking up the movement at the same spot in the following scene. It is especially important to match the action closely when a long shot and closeup of continuous movement are both shot from the same angle. In a case such as this, if there is more than a slight discrepancy in the action patterns of the two scenes, a *jump cut* will result.

If, on the other hand, the shift from long shot to closeup involves a considerable change of angle we can jump the action ahead several feet without the gap being noticed. Where an awkward gap is unavoidable, we can lessen the jolt by a *cut in*, a *cut away shot*, an *optical transition* or (if worse comes to worse) a *sub title*.

A *cut in* or *in cut* is a closeup of a section of the main action. It is one of the best and most natural devices to use in bridging a gap between two scenes because it focuses audience attention closely upon the action of the story.

The *cut away* is a shot which literally cuts away from the main action to another segment of the same situation. For example, in a film showing a football game, *cut aways* would include shots of the crowd, the score board, the band, cheer leaders, etc. Lapses in time can also be covered by effective *cut aways*.

Optical transitions include *dissolves*, *wipes*, *fades* etc. which are actually made in the laboratory. These devices in addition to providing a smooth way to change scenes are useful in smoothing out gaps in time, place or subject—although they should not be used as substitutes for good continuity.

Inter cutting is the technique of repeatedly cutting back and forth from one scene to another, either in the same or different locales. This is sometimes very effective as a means of creating suspense. It is also a good way to cheat the time element since it gives the audience a chance to forget the exact stages of development of the action shown in previous cuts of the scene.

Cutting for Tempo

Tempo is one of the most important elements to be considered in creative cutting. Applied to the editing process, the word *tempo* means variation in pace throughout the film. Pace depends upon two factors: the speed of the action and the length of individual scenes. A pattern of tempo repeated several times lends *rhythm* to your cutting.

Obviously, a slow pace requires slow action and longer individual scenes, whereas rapid pace requires the exact opposite. A relatively slow pace is appropriate for historical scenes, melodramas, mysteries etc., although one must avoid letting any story drag. Rapid pace is almost a requirement for light comedies, suspense stories and lively action dramas.

We have said that *pace* depends partially upon the length of individual scenes. But, scene length, in turn, depends upon the duration of action in the particular scene. For example, if it takes 20 frames for a man in close up to turn his head, you can cut that 20 frames into the continuity as a separate scene and it will have a complete and coherent meaning. If, on the other hand, it takes four feet of film for that man to turn his head and you use only 20 frames of the scene, you will have a disembodied fragment of action with no meaning to it at all. If you expect to cut scenes short for rapid pace, be sure that the action within those scenes is rapidly paced.

Tempo as we have pointed out, implies a *variation* in pace. This variation gives light and shade to your screen story. If you proceed at the same rate of pace throughout the film, the story will lack emphasis. Therefore, vary the pace of cutting according to the demands of the sequence.

Cutting for Dramatic Punch

Dramatic punch is a rather colloquial but direct term meaning *cinematic impact*. It is a somewhat elusive expression to define, but the proof of its effectiveness lies in whether or not the audiences reacts correctly to the force of the screen situation. By "correctly," we mean does the audience sit up and take notice at the right times?

Dramatic punch is achieved by placing the emphasis of the situation at the proper point in the sequence This is primarily a problem of direction but even more definitely a matter of deft cutting All of the tricks of the editor's trade must sometimes be brought into play to insure a definite result

Generally speaking, the closer we get to a subject, the more emphatic the impression of that subject becomes For this reason, *image size* has a good deal to do with *dramatic punch* The closeup is the most emphatic of all angles because it brings the audience face to face with the subject Use your closeups where *punch* is needed in the film narrative Don't waste them on unimportant details or you will have nothing forceful left to use when you want to make an important statement

Build up to your climactic scenes by making sure that the scenes which go before lead directly to that climax It is sometimes effective to begin a sequence with slowly paced cutting gradually quickening the tempo and cutting in closer and closer shots until the action develops in the climactic scene Hit your audience with the important idea, hold the shot just long enough for it to register, then go on to the next sequence

Avoid forcing *dramatic punch* into your film by means of chopped up *montages* or the kind of radical cutting which highbrows like to call "impressionism" Such vague symbolism may be perfectly all right in experimental films made for the chosen few, but it has proved to be merely confusing to the mass audience

Boiling the whole problem down to its basic essentials, let us say that the real secret of cutting for dramatic punch is to include in a particular scene only as much of the action as can best be portrayed by that particular angle Plan your shots carefully before shooting so that you will be sure to include enough different angles to cover your subject in the most emphatic manner

The Professional Touch

While good editing cannot in itself *make* a picture, poor editing can very definitely *unmake* it The surest sign of the amateur (next to poor photography and direction) is sloppy, undramatic cutting On the other hand—deft, forceful cutting can sometimes breathe into prosaic footage a vitality which was not apparent in the rough cut

Take your time making the final cut Make sure that you know your footage and the effect you want to place on the screen Although you are cutting for three separate elements—continuity, tempo and punch—you cannot arbitrarily separate them because each is very closely related to the other

Remember that you are not working with separate, unrelated strips of film, you are working with scenes that should fit together like the stones of a mosaic to produce a dramatic overall pattern In this process, *association of ideas* plays a vital part Be on the alert to tie your scenes together by means of the elements they have in common

In making your final cut screen your footage again and again each time concentrating on one of the three important cutting factors Remember that the smoothest jobs of cutting are the result of gradually whittling down the footage, not haphazard slashing

NEXT ISSUE Part 17—*"Sound Recording and Cutting"*

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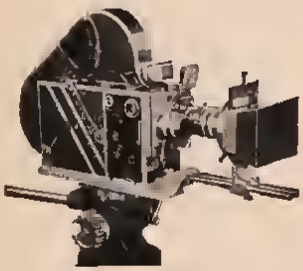

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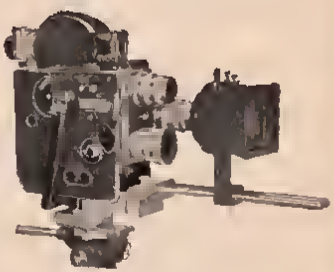

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HISTORICAL DEVELOPMENT OF SOUND FILMS

By EARL I. SPONABLE

(Twentieth Century-Fox Film Corp., New York)

PART 4

(Editor's Note: This most informative paper was presented by the author at the October, 1946 convention of the Society of Motion Picture Engineers in Hollywood and published in the May, 1947, issue of the SMPE Journal. It is reprinted through permission of the SMPE and concluding section will be published in our November issue.)

(Continued from Last Issue)

Sept., 1928 Fox Movietone City was dedicated. (This is the present Twentieth Century-Fox Studios at Beverly Hills, Calif.)

Oct. 6, 1928 The Fox Movietone News release was increased from one to two issues per week.

Dec., 1928 "In Old Arizona," the first out-of-door recorded feature picture, was shown at the Criterion Theatre in Los Angeles. Quoting Franklin: "This film was photographed and recorded out-doors against a sweeping background of natural beauty, and in it sound recording achieved its highest artistic success up to that time. Filmed and recorded right in the vast open spaces the scenes and human voice and all the accompanying sounds were reproduced with a clearness and naturalness that attracted wide attention. The Movietone process caught and reproduced with fidelity not only the voices of the actors, but actually the natural sounds of the outdoors—the whispering of the wind, the song of the birds. The picture was thus notable in combining the perfected technique of the silent film with the faithful recording of music, dialogue and sound."

Subsequent Fox pictures that were well received and helped to advance the art of sound recording included the all-talking pictures "Through Different Eyes" and "Hearts in Dixie."

Dec. 3, 1928 Fox Movietone News release was increased to three issues per week.

During the year 1928, appreciable general progress was made in perfecting Movietone technique, one point of note was the perfecting of the Aeo lights by Case, increasing their useful life and uniformity.

Sponable organized a research department to which was assigned the problem of improving sound recording apparatus, particularly with a view to reducing its weight and improving its portability and ease of operation—as well as the over-all problem of improving recording and reproducing equipment and techniques. Fifty-six field units were scheduled for assignment all over the world; three special Aviation Units were activated, to meet the need for such an increase in personnel. Bragg was sent to interview recent graduates at various technical institutions. Well over 100 engineers were now engaged in the sound recording field.

Feb. 28, 1929 Fox acquired control of Loew's and MGM.

Mar., 1929 Fox announced that all silent product would be discontinued and only Movietone pictures would be made.

July 15, 1929 The Fox Movietone News release schedule was increased to four issues per week.

July 18, 1929 William Fox was injured in an automobile accident, this may have seriously affected the following up of his involved negotiations.

July, 1929 British Movietone News, the first foreign sound newsreel producing company, was started.

Aug., 1929 A merger of Fox Film, Fox Theatres, and Loew's was planned.

Sept. 20, 1929 Fox negotiated a deal acquiring Fox-Case stock from Case and exchanging Fox Theatre stock to be redeemed September 1, 1930. Fox then formed the Fox Hearst Corporation, Hearst acquiring about 24 percent of original Fox-Case stock with option to buy about 25 percent more.

Fox made a separate agreement with Case to have the latter run his laboratory until July 23, 1930.

Sept., 1929 Fox and Hearst united their sound newsreels and agreed that each would release two per week.

Sept. 17, 1929 An all-Grandeur show opened at the Gaiety Theatre with Grandeur News and Fox Movietone Follies.

Sept. 28, 1929 Hearst Metrotone News released its first issue.

Nov. 2, 1929 The Embassy Theatre was opened with the first all-sound news program and called "The Newsreel Theatre."

1930 The crash of 1929 found the Fox structure in such a condition of over-expansion that it became necessary for Fox to sell out.

Controlling interests in Fox Film and Fox Theatres were acquired by a group headed by Hatley Clarke, who became president of the Fox companies.

Sound-on-film by this time was well established as a commercial success and was displaying sound-on-disk as a release medium. The Western Electric light-valve method of sound-on-film recording was commercially perfected. As Fox Film was a licensee of ERPI and as such paid the regular royalty rates, it decided to give up its own method of Aeo light recording and use in entirety the Western Electric system.

PART 4 FOREIGN PROGRESS IN SOUND FILMS AND RELATIONS WITH FOX

Sept., 1922 The first showing of acoustic films was made in the Alhambra Theatre, Berlin. These were made using the "Tri-Ergon" method with the sound recorded on a film about 42 mm wide and the sound placed outside the sprocket holes. (This system was worked out by three inventors—Engl, Massole, and Vogt, who had formed a sound-film company called the Tri Ergon A.G., of Zurich.)

July, 1926 F. A. Schroeder, who was the American representative of the German group, brought their system to the attention of Courtland Smith.

Aug., 1926 John Joy went to Europe to investigate Tri-Ergon for Fox.

Dec., 1926 At Joy's request Dr. Engl brought a complete unit of the German apparatus to New York for examination and tests. Records were made and shown under the direction of Dr. Engl; the results were judged to be fair, but not so good as Movietone. This was to some extent the result of the use of condenser loudspeakers in the German system. The equipment as a whole was typically German in design and offered few features that could be advantageously combined with the Movietone system.

July, 1927 Fox took over rights to the German system for North America and rejected a chance to acquire the world rights. This soon proved to be a mistake, since the patents became troublesome in foreign countries, and royalties were collected on them.

Shortly thereafter, Joy and Schroeder went to Europe to get an extension of scope to the Fox agreement to permit use throughout the world. Also during this time UFA of Germany acquired a license under the German system.

Feb., 1928 During the interval since July, 1927 Tri Ergon had tried to bring together all German companies interested in sound pictures including Siemens and Halske, AEG and others. This was not entirely successful as Siemens and Halske and AEG wanted too much and Tri-Ergon would not agree to their stand.

Aug., 1928 Tri Ergon formed a German operating company backed by the Commerce and Private Bank and called Tonbild Syndicate A.G. (or Tobis) with rights in Germany, Switzerland and Austria.

Sept., 1928 Negotiations were carried on by Joy and Rogers for Fox with Tri-Ergon and Tobis to make a working arrangement to record and reproduce sound throughout the world under Tri Ergon patents. No agreement was reached.

Nov.-Dec., 1928 Schlesinger of London and South Africa, who had purchased the de Forest Phonofilm Company, attempted negotiations with Tobis and Tri-Ergon for joining de Forest and Tri-Ergon on a world basis. This did not go through.

Jan., 1929 Siemens and Halske and AEG combined interests in the sound picture field by organizing a company called Klangfilm.

Klangfilm attempted to release a picture made by RCA in America in one of the UFA Theatres in Berlin. Tobis stopped this with an injunction on the grounds that the picture was recorded by double system, *i. e.* sound and picture separate, and recombined in a single positive. It was claimed this infringed Tri Ergon patents. The result of the court's decision sustained by the higher court, made Klangfilm make a working agreement with Tobis.

During this time Fox interests kept up communication with representatives of Tobis and

Tri Ergon for the purpose of making a working arrangement through American Tri-Ergon to permit Fox to record and reproduce throughout the world under the German patents No such arrangement was agreed upon

April, 1929 Attempts were being made at this time by various groups to join together the various Tri-Ergon interests and Klangfilm in opposition to Western Electric progress in foreign countries Nothing resulted from this

June, 1929 Kuckenmeister, a German phonograph manufacturer, through connections with Oyens and Sons, a Holland banking firm became interested in organizing a holding company to unite various Tri Ergon interests, not controlled by Fox into one group This was concluded in June 1929 and called "Acoustic Products Company of Holland

About this time Tri Ergon started suits against Electrical Research Products, Inc , and during the summer obtained injunctions restraining the reproduction of all American pictures on ERPI apparatus in Germany Some of the original decisions have since been sustained so that except by special agreement with Tobis, American sound films were prevented from being released in Germany Warner Brothers obtained a special license from Tobis and have released their films

May-Aug 1929 Joy attempted to obtain a working agreement with Tobis to protect Newsreel recording and allow release of Fox products in Germany No arrangement was concluded

Various conferences were held among representatives of ERPI Tobis, Siemens, and AEG both in Europe and in America No agreement was reached

Sept , 1929 Schlesinger concluded an arrangement with Kuckenmeister in which his British company was allied with Tobis and Klangfilm Advantages Fox could have had were now being acquired by others

Oct 1929 Tobis brought suit against Movietone in Germany and Austria All Fox Newsreel trucks were removed from these countries

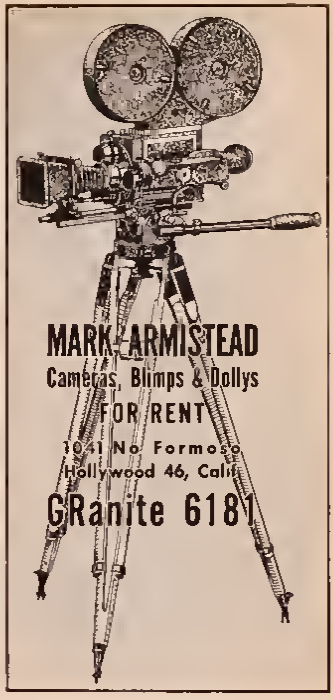
During the last six months of 1929, both Tobis and Klangfilm moved forward, both in theatre installations and in the production of sound pictures They made an alliance with a French producing company, and arranged to begin sound work in France

June, 1930 Will Hays headed a committee in Paris which met to deal with foreign sound problems and to attempt a settlement of German relations This tangled situation was finally ironed out and a compact was arrived at on July 22 permitting the showing of American films abroad

(To be Continued)

Kodak's New Flash Bantam

Eastman Kodak announces its new Kodak Flash Bantam f/4 5 camera, featuring built-in synchronization to guarantee positive flash synchronization with shutter speeds up to and including 1/100 of a second in class F lamps Deliveries will be limited for several months until production of the model is stepped up to capacity at the factory



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"HOW TO BECOME AN *Amateur* CINEMATOGRAPHER"

Synopsis of Prize-Winning Film

By CHARLES M. PETERS

(Editor's Note: Charles M. Peters won the mid-year film contest of the Los Angeles Cinema Club recently with a highly original and entertaining 16 mm. kodachrome subject "How to Become an Amateur Cinematographer." We asked Mr. Peters to write a general synopsis of his picture, which is given on this page.

His first effort in making a contest film is interesting. Peters and his wife take many trips around the western portion of the United States and his movie camera was purchased to make scenic views of various points of interest for later projection at home to recall such trips. Friends in the Los Angeles Cinema Club kidded him about making such scenics, decried the waste of film and suggested that picture post cards could be secured for much less money! This led to the suggestion that Peters could employ his camera and equipment to much greater advantage—by making a film for the next contest. His originality in the finished picture demonstrates that the amateur movie maker does not have to travel to far locations to make a prize winning film.)

FOR nearly twenty-five years, Betty and Pete have wandered down life's highway, sometime happy and sometimes sad but always together. Then a great event occurred on June 20, 1946.

Pete being a typical husband who reads the morning newspaper at the breakfast table while the toast burns, and also being the typical salesman, he hurries to work from his home at 9:00 a.m. at the instigation of the wife over the burnt toast, who wants to get some housework done that morning.

It was a beautiful morning, a touch of spring in the clear crisp air that would put any haze filter manufacturer out of business. Down the street came 230 lbs. of Pete, at peace with the world, and his briefcase swinging when a display of camera equipment caught his eye. He slackened his pace, looked again, then stopped altogether. A small, nondescript circular showing a traveller carrying a movie camera caught his eye. The circular has long since been forgotten, but never will the thoughts that went through his mind. Thoughts of trip that he and Betty were always taking and those trips they were planning to take. If you have a movie camera you must take trips to take pictures, and since trips must be taken, a movie camera becomes a must.

So into the store and with due deliberation, a movie camera was bought—but no gadgets, h was going to take pictures and not play around with a lot of needless equipment. Remember also—Pete is a salesman and he is not susceptible to sales talks.

The day wore on and the new cameraman finally started for home, a bit earlier than usual, and with a slight uneasiness over his several hundred dollar purchase.

Betty met him in the driveway, and when he presented the camera and admitted the cost, his slight uneasiness became inflationary. However, salesmanship came to the fore and long before dinnertime they were both planning more and better trips. That evening and in fact well into the next day—3:00 a.m. to be exact—they read with eagerness "How to Make Movies," which was acquired with the camera purchase.

Somewhat dazed and bewildered, they find a need for possibly more information and film, which to the camera store Pete goes to obtain.

Returning home, Pete and Betty start out to shoot their first "Epic," only to find over-and under exposed results and a definite tendency of th picture to jump off the screen. This proved to them a need for a trip to the camera store for tripods, light meters, and later on in seemingly rapid succession came filters, frame counters, faders, splicers, editors, lens, tilters, flood lights, range finders, etc.

While the acquisition costs were mounting from these gadgets, which by now had become a necessity, stock in a film company began to soar on the stock exchange.

When the gadget saturation point was reached, if that point comes before infinity, Betty finds that Pete has mortgaged their home. She, by now having been infected by the same bug, signed the mortgage, and they promptly started studying maps for their first trip.

The trip decided, camera and all this equipment was piled into their car, and to Betty's dismay, she found she couldn't find room in the car, so on to the running board she climbed, and through Zion, Bryce, Jackson Hole, Yellowstone, Carmel, and many other points here in the West they went. On this extended running board trip, a test period was decreed, at which time they evidenced great joy over a stock certificate they possessed, said stock having gone from $43 to $1000 per share.

They also burned the mortgage at this time, and then continued their trip. As they pull back on to the highway, they expose a sign saying "Los Angeles, 2048 miles, Canada, 2 miles"— and so ends "How to Become an Amateur Cinematographer" on June 20, 1947.

The question has been raised: How did Betty and Pete happen to make such a picture?

Very simple—just an attempt to depict a true story of what actually happened during this first year, or a reasonable facsimile thereof. One slight discrepency, that film stock didn't go up. Pete knows. He is a Stock and Bond salesman!

Amateur cinematographer Charles M. Peters sets up his camera to shoot a scene of his wife, Betty, for his prize winning movie.

(photo by Jack Shandler)

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AMONG THE MOVIE CLUBS

Oakland Camera

Movie section of Oakland Camera Club under direction of Dr Numa P Dunne, has launched a project intended to compile a complete movization of the city of Oakland Every member is expected to participate by filming 10 to 15 foot clips of what the individual considers an outstanding feature of the city or its environment Later, all film clips will be edited according to classifications (transportation, industry, scenic civic buildings recreation, etc) and spliced in continuity to provide a complete picturization of the community

At the August 12th meeting, Don Flagg demonstrated proper use of lighting for interior shooting, while film program included Over the Bridge, by S F Russell, and "Yosemite' and The Expensive Key, by E H Brown Expensive Key, originally produced in 1936, was exhibited to demonstrate the advance of amateur technique in the past 10 years

New York Metropolitan

Initial meeting of the new season was held by Metropolitan Motion Picture Club of New York at the Hotel Pennsylvania on September 18th, with splendid film program comprising 'A Trip to Yellowstone Park, by Ernest Miller, A Day of Independence by J J Harley, and In His Judgment, 1944 prize-winner by Harley

Club bulletin announced that regular meetings will be held on the third Thursday of the month with the supplemental meetings on first Wednesday of each month Joe Harley will have charge of the technical sessions, assisted by John Hefele General movie contest for members with prizes of $75 $50 and $25 closes November 1st, according to contest chairman Ralph Eno

Seattle Amateur

Seattle Amateur Movie Club is currently celebrating its 10th anniversary having been organized in 1937 with total of six members Today it rates high among the top progressive clubs of the country

Meeting of September 9th held at Epiphany Hall, covered plenty of activity It was firstly gadget night, with members displaying and explaining accessories they find valuable for movie making Then there was a group of membership films exhibited, a demonstration of the Soundmirrow magnetic tape recorder and showing of the prize-winning picture, "Motion '

New York Eight

New York 8 MM Club is one of the many which kept meetings going during the summer months despite the absence of many members on movie making vacations Film program included subjects made by members, including The Wahlnuts Review" by Sam Pollock, Seasons and Hudson River Day Line by W H Clouse Cynthia Is Freed" by Ben Spaner, and Trip to Gaspe Peninsula ' by Edward Roesken

Los Angeles Eight

Gadget Night was featured at the September 9th meeting of Los Angeles 8 MM Club, held in the Bell & Howell auditorium Members brought various accessories that had been devised to assist in the making of better movies and prizes were awarded to the best entries Each entrant described the purpose of his gadget, and demonstrated practicability for the members and judges Film program of members films was headed by The Frontier Preacher Reads the Bible by Herman Hack

Annual picnic of Los Angeles Eight was held on Sunday, September 21st at North Hollywood Park with members participating in the usual picnic games and activities A club movie of the event was shot for future screenings

San Francisco Cinema

Dave Redfield, with his 10 minute talk on Up-to-the-Minute Ideas About Movie Film and Equipment" featured the September 16th meeting of Cinema Club of San Francisco held at the Women's City Club Film program for the evening included Swim and Live," from Film Library of United Air Lines, and Rio—the City Marvelous, provided through courtesy of Moore McCormick Steamship Company Loring Powell provided 25 minutes of kodachrome slides of the wild and rugged scenery of Western Canada under title of On the Prowl with Powell

Club members have been advised that a free course in "Making Amateur Movies will be given two nights weekly at Marina Junior High School

La Casa, Alhambra

Monthly meeting of La Casa Movie Club of Alhambra, Calif was held on September 15th at the Y M C A with film program comprising Pacific Northwest Victoria, Yellowstone and Virginia City, by William A Ware, Grand Canyon Vacation by George B Stone, Yosemite 1947 and Boat Races 1947" by R H Rollins, Past and Present Farm Machinery by William R Wyatt 1947 Vacation,' by Clarence C Hesse and Water Color Painting by Frank Knaus

Subscriptions Offered For Contest Prizes

With annual contests by amateur cine clubs rolling around chairmen of such events in the various organizations are reminded that AMERICAN CINEMATOGRAPHER will donate a year's subscription as a prize This policy was adopted several years ago to encourage amateur contests in the clubs, and to further activities in the 8 and 16 mm fields

Contest chairmen can automatically set the subscription as a prize on the list, and advise AMERICAN CINEMATOGRAPHER of the name and address of the winner of the award

Brooklyn Amateur

Brooklyn Amateur Cine Club resumes meetings, after summer layoff, on September 17th at the Neighborhood Club auditorium The latter has been engaged for all meetings during the coming year Film program comprised "Railroad Signal" by Fred Beach Clear to the Top" loaned by Calvert Distillers, and a group of amateur subjects

Board of directors voted to enlarge activities of the club by staging a "Special 8 MM Gala Night" annually Program will consist of member films and admission charge of 75 cents will be made Also regular technical lectures and demonstrations will be held during the year first slated for October 1st when Gene Adams talks on lenses Program will be augmented with a film, 'Lenses and Their Uses,' by the Harmon Foundation Closing date for club's annual contest has been set for November 19th

Utah Cine Arts

Pete Larsen was chairman of the September 17th meeting of Utah Cine Arts Club, held at the Newhouse Hotel, Salt Lake City A surprise film by Al Morton opened the meeting, followed by a technical discussion and demonstration by Al Londema on how to prepare titles for a film within 15 minutes so that the picture can be projected before an audience

Finale was Volcano" in 16 mm kodachrome by Alan Probert which recorded the three year development of the Paricutin volcano in Mexico Probert movie-making enthusiast and mining engineer made the film on frequent trips to the volcano area

Victorian Amateur

Entries for the 194" Five Best contest of Victoria Amateur Cine Society close on October 22nd, with competition open to all amateur movie makers in Australia In addition to trophies for each of the five best President C D Wicks of V A C S will present an engraved trophy for best film submitted by a member of his club Entries will be screened publicly on November 7th

Los Angeles Cinema

Film program of the September 8th meeting of Los Angeles Cinema Club, held at the Ebell Club, included Arizona Holiday by William P Johnson Four Grand Symphonies, by C W Courtney, Sierra Holiday' by Jack Starkey Grand Canyon and Bryce" by Mrs Kellam, and two special attractions, Bikini,' and Silent Service

Philadelphia Cinema

First fall meeting of Philadelphia Cinema Club was held at Franklin Institute on September 9th with film program consisting of Grow What You Eat, by Charles Allen, and Winter in New Hampshire loaned by University of New Hampshire

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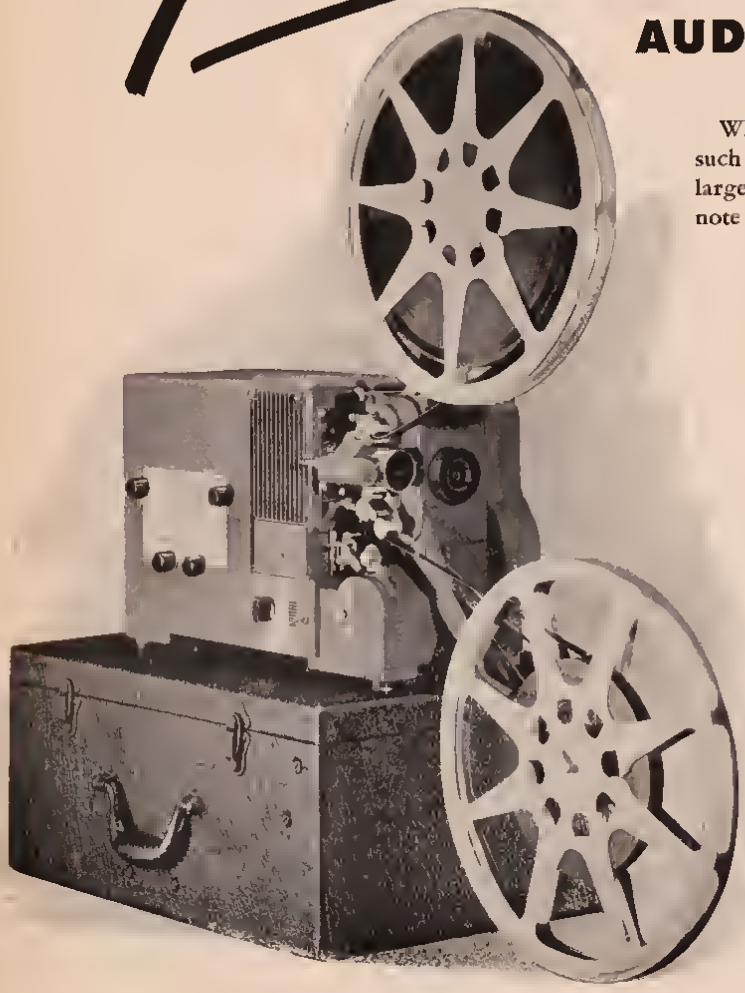

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Koda

Aces of the Camera

(Continued from Page 351)

this production, and the expedition was about the longest and extended distant foreign location dispatched by a Hollywood studio to that time In addition, it was the first such location-made film which had sound effects track, including music, native singing and background sounds of the islands

Because the studio had set it as an important production, the expedition carried a complete production crew and equipment, with lights, generators, etc, and all interiors were made in Tahiti—with only a dozen minor added scenes later shot at the studio The unit was away from the studio a total of 11 months

In impressing the importance of the portable laboratory for processing of the negative, DeVinna pointed out that—in those days—a minimum of a month to six weeks would have been required to get the exposed negative back to the studio for developing Such a procedure would be fatal, he stated, as the long boat trip through the tropics was likely to deteriorate the emulsion Another, and most important favorable factor, was the advantage of seeing daily prints of footage shot the previous day So a full supply of both negative and positive was taken along, carefully handled with tropical pack and cold storage to prevent depreciation of the emulsion Leahy was again in charge of the location lab

One of the major problems in shooting at Tahiti, Clyde commented, is the terrific inherent contrast whereby the easiest thing to obtain is a sharp black-and-white contrast which can only be toned down by control in lab processing of the negative

Photographing in Tahiti also presents many problems, he continued In the dry season, it is difficult to filter without over correcting, as the air is so clear During the rainy season—November through March—it is virtually impossible to shoot as the air is full of water in contrast to the conditions existing in the dry season But with all these unfavorable conditions Clyde delivered an outstanding photographic job with White Shadows, attested by the fact it was chosen for the Academy Award honors

DeVinna had only been back at the MGM studios for a few months when he was tabbed as Director of Photography for another far-distant location—this time to equatorial British East Africa for the production of "Trader Horn" With the recent experience of the "White Shadows" expedition, the studio made this an even more complete production unit in all departments, and in addition to a large staff, virtually a boatload of equipment of all kinds was carried along

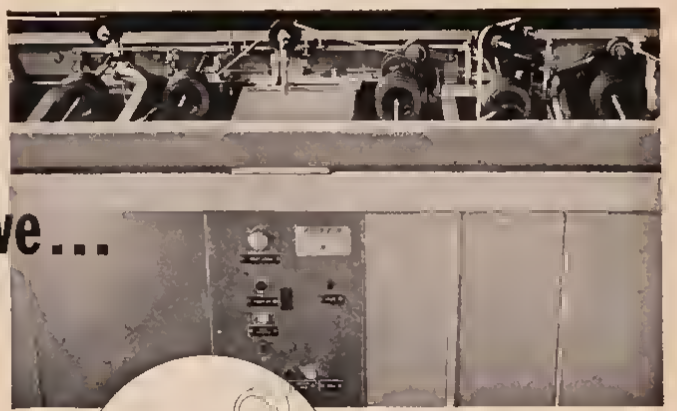
For "Trader Horn, Clyde had practically the same camera crew that he had at Tahiti, and the unit was decidedly flexible so he could assign three or four cameras on wild game and game drive shots, although he used only the one camera for the dramatic scenes

"Trader Horn" was originally started as a silent production, but after the unit was in Africa a few months, the studio executives decided that it should be made as a talkie due to the lightning introduction of sound into films The far off unit was advised that recording equipment and sound cameras were being shipped from New York direct to save time, but when the apparatus arrived there were no sound cameras in the shipment

So a field Akeley was rigged up with a flexible shaft and interlock motors in an attempt to synchronize the dialogue, but this proved unsatisfactory and the idea of synking dialogue to action was abandoned entirely, with the sound recorder used only to obtain animal and jungle noises for dubbing in later at the studio

In Africa, the semi-portable film processing laboratory was not carried onto location, but set up in a big stone building secured at Nairobi The film was sent from location for processing by either runner or truck, so that there was little danger of deterioration, and the daily rushes could be viewed to check on shooting But where Leahy had the problem of dampness in handling negative and positive in Tahiti, the lab technicians at Nairobi encountered reverse conditions The extremely dry climate necessitated watering down the floor of the lab to create proper atmospheric conditions for best film developing

The African country right on the equator posed numerous problems for the cinematographer DeVinna pointed out that anytime you get near the equator, the sun's rays are directed straight down and there is no reflected or slant light whatsoever—especially during the noontime period In the afternoon, heat



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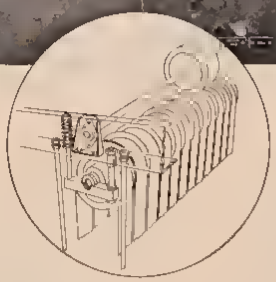

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waves rising from the ground prevented hovering, as they were so strong that they would register on the film. Result was that the unit started early in the morning and was forced to knock off around 10:30 a.m. The same contrasty light encountered in Tahiti existed in Africa, with extreme flatness in the open country on account of the direct overhead light source. But in the woods, the trees were so tall and close together that the sun never showed through to the ground and the latter was in virtual darkness. When scenes had to be made here, the camera was wide open and light was produced by plenty of artificial arc and inkie spots.

After 11 months in Africa, the unit finally returned to the studio, where many more months were consumed on interiors and tie-in scenes, and the necessary dialogue sound before the picture was completed. DeVinna had a respite with a series of productions at the studio for a time, including several Tarzans and Wallace Beery starrers. But in early 1932 he was off again to northern Alaska to handle the photography on "Eskimo." The permanent location, where the unit spent more than 10 months, was 150 miles north of Nome and within the Arctic Circle. On this trip the portable laboratory was not taken along, as arrangements had been made for the exposed film to be shipped via air to the studio for processing. But this was not feasible as the director and photographer could not keep tab on the quality of footage shot from day to day. However there was no danger to the film itself, as the climate was so cold that the precautions of the tropics could be ignored entirely.

On the "Eskimo" location, DeVinna stated that the main problem was the intense cold—which generally ran to zero or far below—requiring that both the camera and film be kept in a temperature close to that for which each would be used in shooting. As a precaution before leaving the studio, tests were made at California Institute of Technology to determine the best operative procedure for the cameras. As a result, the Bell & Howells were run practically without oil when used on the Arctic location and the Mitchell camera was continually standing on the interior set between scenes to accustom it to the temperature.

In addition to the extreme cold which prevailed, the mosquitoes of the early summer were followed by hordes of black gnats to make life most uncomfortable in the far north, but somehow the unit struggled through to bring back a completed picture. Back at the MGM studios DeVinna had a brief interlude on regular production, but shortly took off again for Tahiti on a six month stretch to photograph "The Last of the Pagans." This expedition was probably the first which used the process of de-hydrating the film and containers, a method which has been universally employed since in tropical countries to prevent film spoilage.

The globe-trotting Clyde later made filming trips to Indo-China and China on the latter occasion to obtain authentic backgrounds for "The Good Earth." Spotted in between these expeditions, he has made innumerable other short trips to Mexico (longest for location of "Viva Villa"), to Panama in 1926 with the [illegible] to the Antilles, South America, Cuba, Dutch Guiana, in fact [illegible] every part of the United States.

It was in Panama that DeVinna became acquainted with a Marine captain who took him in tow during shooting. Clyde decided that the Marine branch was so fine that he would be a Marine if he ever went back into service. So in 1942, he joined the Marines with the rank of captain—and soon ran into the former United States fleet to handle photography on [illegible] as a general [illegible] photo officer with the fourth Marine [illegible]. Clyde went through the Pacific engagements including Saipan and the Marshalls.

Now out of service—but a major in the Marine Corps Reserve—DeVinna has resumed his studio work with major companies on a free-lance basis. But he does not seem to be able to side step any approaches that will take him on an extended film expedition to some distant part of the world!

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PHOTOGRAPHIC EQUIPMENT CORPORATION OF AMERICA

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THE S.E.I. EXPOSURE METER

THERE is no doubt that determining proper exposure has occupied the minds of photographers since the beginning of the art. The organic relationship between exposure and photographic results has long been recognized. The recognition of this relationship gave the photographer the H & D curve, which is simply the interdependence of exposure and density. The fact that his interdependence has been known for a long time did not help the photographers in selecting their exposure times to obtain best results. Experience has helped the compilation of tables and calculators that gave exposure times for average conditions. For unusual conditions the photographer had to fall back on his luck. No wonder that early attempts were made to mechanize the determination of exposure times and remove possible sources of errors.

This lead to the development of visual exposure meters, frequently known as the extinction type, requiring sighting the subject through a ground or tinted glass screen and using the scales when minimum visibility has been reached. This type of meter offered advantages over exposure tables, but failed in its purpose on account of the sensitivity of the human eye, which adapts itself readily to changing light intensities and does not act as a measuring device.

There followed later as a great advance the adoption of photo-electric exposure meters in which the photo-electric cell converts light energy into measurable electrical energy. The electrical energy is indicated on a micro ammeter generally calibrated in units directly applicable to exposure time or foot candles.

The photo-electric exposure meter further reduced guesswork, although readings are necessarily subject to a considerable degree of critical interpretation, principally because such meters record the average brightness of the scene, or, in the case of so-called incident light meters indicate a total amount of light falling upon the scene without regard to its reflectance or its depth of shadows.

It is with the foregoing in mind that an entirely new type of exposure meter was designed and developed by Salford Electrical Instruments, Ltd., of England under the trade name of SEI exposure meter which combines all the advantageous features of both the visual meter and the photo-electric meter, while avoiding their disadvantages. It is independent of the eye fatigue or variation in human vision. It makes possible to select the most important subject or a small part of a subject in the scene, view it through a telescope of the instrument, and measure its reflectance in terms of exposure without reference to separate tables. The meter makes use of the well known photometric principle according to which the brightness of a small area in the subject is compared with a known brightness within the meter. The brightness within the meter is kept within very rigid limits through a unique self-calibrating device employing a photo-electric cell and a sensitive micro-ammeter.

The schematic diagram shows how the above principle has been applied. The meter coil in the micro-ammeter is connected to the photo-electric cell, directly above the electric bulb (9) which is fed from the flashlight battery. The rheostat in the base of the meter serves to keep the brightness of the bulb at a constant value by bringing the needle of the ammeter to a fixed point. Number 3 in the illustration is a cemented double prism forming a cube, which has a silvered comparison spot on its diagonal surface.

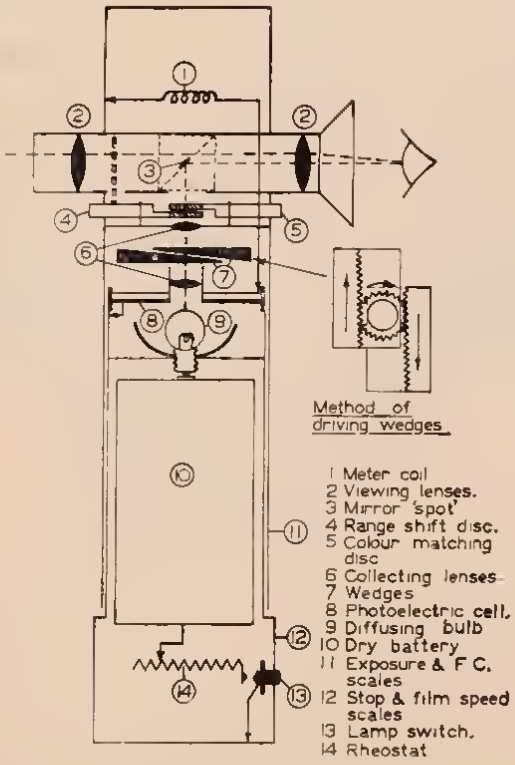
In practice the subject is sighted through the telescope and is seen approximately full size but inverted. By pressing the switch (13) in the base of the meter the lamps throw a beam of light through the collecting lenses (6) onto the silvered spot, which appears in the center of the field of vision. Placed between the two collecting lenses are two opposed photo-metric wedges (7). They are controlled through a rack and pinion mechanism by rotating the base of the meter. The light reaching the comparison spot can thus be varied through a brightness range of 100 to 1. Reduction of the subject or lamp brightness by interposition of filters (4) matching filters for daylight and tungsten light photography.

By turning the appropriate range disc and color matching filters the meter is brought into the desired range and by rotating the base of the meter, the brightness in the subject is matched exactly to the brightness of the spot. When the brightness of the spot equals that of the subject the meter is in the position where the exposure can simply be read off the scales.

Altogether, there are seven scales on the meter:

1. Relative densities
2. Log foot lamberts
3. Low range exposure times
4. Notmal range exposure times
5. High range exposure times
6. Lens apertures
7. ASA film speed index

The exposure meter is equally applicable to the measurement of exposures in projection



Schematic diagram showing photo-electric self calibrating feature and opposed wedge control of the spot brightness. Rotation of 12 relative to 11 slides wedges 7 over each other, and controls brightness of 'spot' 3

printing and the addition of a supplementary lens converts it for use as a transmission and reflection densitometer

The meter's working range is from 1/500,000 of a second to two hours and 47 minutes, or expressed in terms of visual perception from just above the threshold of human vision to bright white clouds near the sun

It enables the photographer to secure measurements with an accuracy hitherto unobtainable by taking readings of very small areas from the camera position It is recommended to proceed on the basis of the well-proven principle to expose for the shadows and develop for the highlights The meter gives exact readings of the shadows either in terms of exposure or in units of reflectance, i e. foot lamberts After these readings have been taken the highlights can be measured, and the brightness range calculated directly from readings of the meter

One of the greatest advantages of the meter for motion picture work lies in the fact that the meter can be used from the camera position for the measurement of selected sections in the scene, or parts of a face unaffected by extraneous light such as backlighting, and the exposure determined within less than ten per cent deviation Even under rigidly controlled studio lighting conditions, the meter is very useful, becoming indispensable in color work, where a much more precise measurement of light conditions is absolutely necessary

For outdoor motion picture photography the meter is extremely useful because of the scattered light which makes the taking of incident light measurements impractical and the reading of a selected area in the scene is even more important

The meter's extreme range makes it very valuable in motion picture process work, where it was found that photo-electric cells do not register the slight differences in light intensities any longer

The meter is built to a rigid specification by the Salford Electrical Instruments Ltd of Salford, a subsidiary of the General Electric Company Ltd of England The company has long specialized in the production of fine instruments and is well known in the industry for precision work and high standards of workmanship

P. S. A. Amateur Movie Exhibit at Convention

Major highlights of the annual convention of the Photographic Society of America to be held in Oklahoma City, October 8 to 31, will be a contest for selection of the best amateur 8 and 16 mm movies, and exhibition of special industrial, educational and commercial films

From the several hundred amateur films submitted for the contest, the best in opinion of the judges will be screened during a four-day period The most outstanding films will be duplicated by owners permission, and will later be sent around the country as a travelling show to demonstrate the finest amateur-made movies of 1947.

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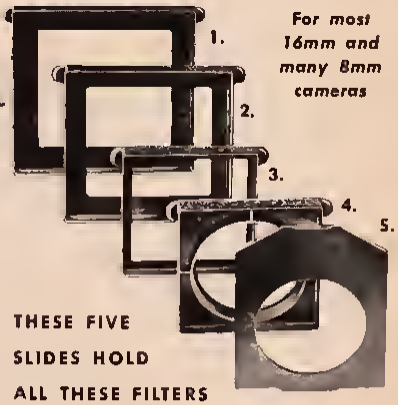

For most 16mm and many 8mm cameras

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   3" sq Graduate Filters
   3" sq Fog Filters
   3" sq Diffusion Filters
   3" sq Gauzes
2. 2¼" Round Filters
   2¼" Round Diffusion Filters
   Standard Pola-Screen with 90° Arc Adjustment
3. 2" sq Square Filters
   2" sq Graduate Filters
   2" sq Fog Filters
   2" sq Gauzes

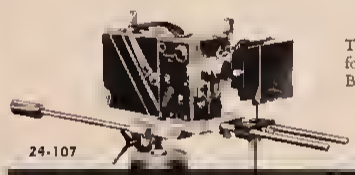
   NOTE — A duplicate 2" square slide accepting same filters as listed in No 3 is furnished with each unit
4. Adapter for E K Series VI Filters Any 1⅝" diameter Filter
5. 1 to 4 gelatin Filters (2 extra slides furnished)

THESE FIVE SLIDES HOLD ALL THESE FILTERS

Here is a matte box and lens shade with which you can get every effect and combination the camera men in the major studios of Hollywood use such as gauzes for fog effects, cigarette burnouts, and sky effects as well as filter combinations

Its angle of acceptance permits use with a 15mm lens on a 16mm camera Unit is supported on slide rods dovetailed to a camera base, permitting easy horizontal or vertical adjustments for quick camera or lens changes

A series of removable slides in various sizes accepts all the standard filters, gauzes, pola screens and gelatins listed at left This permits the cinematographer to quickly combine filters in many desired combinations heretofore impossible



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HOLLYWOOD, CALIFORNIA

SO YOU WANT TO ADD SOUND TO YOUR MOVIES?

By JAMES R. OSWALD

As an [illegible] serious minded home movie [illegible] who has already grappled with [illegible] mastered the fundamentals of good motion picture photography, what his ultimate aim is towards perfecting screen presentations. The answer will invariably be *talkies*. economical, theatre-like, yet easy-to make talkies.

Not meaning to take a pessimistic approach to the subject, but merely a *realistic* one let us consider for a moment the possibilities and practicability of home made sound films from the standpoint of the average amateur's limited knowledge of acoustics and usually limited pocketbook.

To begin with, a basic model 16 mm sound camera even in normal times costs upwards of one thousand dollars, a sum not to be trifled with no matter what one's financial standing. And I say *basic model* for such a camera would incorporate only features absolutely essential to the simultaneous recording of both picture and sound *on location* with none of the refinements for the post recording or dubbing in of the sound *after* the picture is filmed and edited, a feature so highly desirable for the travelogue or documentary type of movie the average amateur is most accustomed to making.

But disregarding entirely the monetary outlay and drawbacks of not being able to have the benefit of a pre-planned carefully rehearsed narration or appropriate musical background accompanying the film, let us take into consideration now the problem of acoustics. It doesn't take a skilled sound technician long to impress upon the interested amateur the difficulties encountered with the most expensive of equipment, in the attempt for true-to-life recordings. For, even the casual theater-goer with no particular inclinations toward the technical side of motion picture production whatever is usually well aware of the painstaking work and elaborate set-ups that are a part of capturing the crystal clear tones of the faintest whisper or most thunderous roar he hears emanating from the screen of his favorite theater. It becomes quite evident, therefore that in recording on location, the slightest gush of wind, the noise of a passing automobile or any other unexpected disturbance that arises while recording is going on, would be sufficient to spoil the sound track of a *photographically* perfect film, necessitating its being projected with these defects in sound or with the reproducing system cut off entirely and no sound at all.

But there is a brighter side to this rather gloomy picture I have painted for the home movie enthusiast so desirous and wisely so of presenting his films with sound. Amateur movies, by their very nature of usually being the "travelogue" or documentary type, are highly adaptable to a smooth flowing *musical* background, with or without accompanying narration. If no running commentary is required the use of an electrically amplified phonograph automatic record changer, or better still dual turntable assembly which permits an uninterrupted program of any length through skillful blending of selections, is suggested as a means of providing the desired musical background to a home movie presentation.

That narration is not essential in a well arranged sound film is substantiated by the fact that many professional movies of the variety filmed by the amateur, have as their sole sound accompaniment an appropriate musical background, even though the producers of such films have at their disposal the finest facilities for making voice recordings. However the amateur who still feels dialogue a must to bring out the best in his screen presentations, and believes himself well enough versed in the art of public speaking that his commentary will be definitely advantageous, rather than detrimental to the films may employ the use of a microphone in conjunction with whatever type of sound reproducing system is being utilized.

After a technique has been acquired for the harmonious coordination of sound and picture the critical movie maker will undoubtedly strive for closest possible synchronization between the two and if his present collection of films does not demand such exacting standards the chances are, sooner or later, he will go into "production" on one that will. Indeed many ambitious amateurs have attained so high a degree of perfection in adding sound accompaniment to their movies that they cannot be told from the professional, sound-on-film variety.

The series of pictures illustrated along with this article will offer suggestions to the filmer who would like to try his hand at turning out a movie that when screened, cannot be detected from the true soundies. With an obliging manager of a local public field house furnishing an appropriate setting and through the splendid cooperation of versatile Miss Jane Ricketts who provided the talent the filming of these dance routines was made possible. In a movie of this nature, not only the rehearsals, but the actual shooting, itself, is carried out to the accompaniment of the music that will be cued to the picture on the screen. This, obviously, aids the dancer in performing the most difficult steps to perfection and at the

The taps of a dancer in routines as shown above can easily be recorded for perfect synchronization of picture and sound

sync film, simplifies synchronization when projecting.

The possibilities in presenting amateur made films with sound by one of the methods outlined are almost unlimited, as a good many enthusiasts have already found out. But opening still greater horizons to those who insist on nothing but the best, the recent introduction of a sensational new popular priced wire recorder-radio-phonograph combination is capturing the fancy of alert home movie fans everywhere. Employing latest scientific developments in electronics, this unique instrument not only makes it possible to record on a magnetic spool of wire and play back a continuous program up to one hour's duration, but in the event of error, or desire of change, through the flick of a switch the entire program or any part thereof may be completely "wiped off" the magnetized wire, and the wire reused.

With innovations such as this making history in the fields of sound recording and reproducing, and taking into consideration the endless array of talent available on conventional phonograph records, *surely* you want to add sound to your movies!

New Equipment Catalogue Issued by S. O. S.

The 21st anniversary edition of the annual catalogue of S O S Cinema Supply Corporation, listing in excess of 900 items for production and exhibition of 35 mm, 16 mm, and 8 mm films, is now available from the company on request. Requests for copies should be addressed to S O S at 449 West 42nd Street, New York City.

Each item, carrying guarantee, is described in detail and specifically priced. A large export department is maintained to handle orders from foreign countries.

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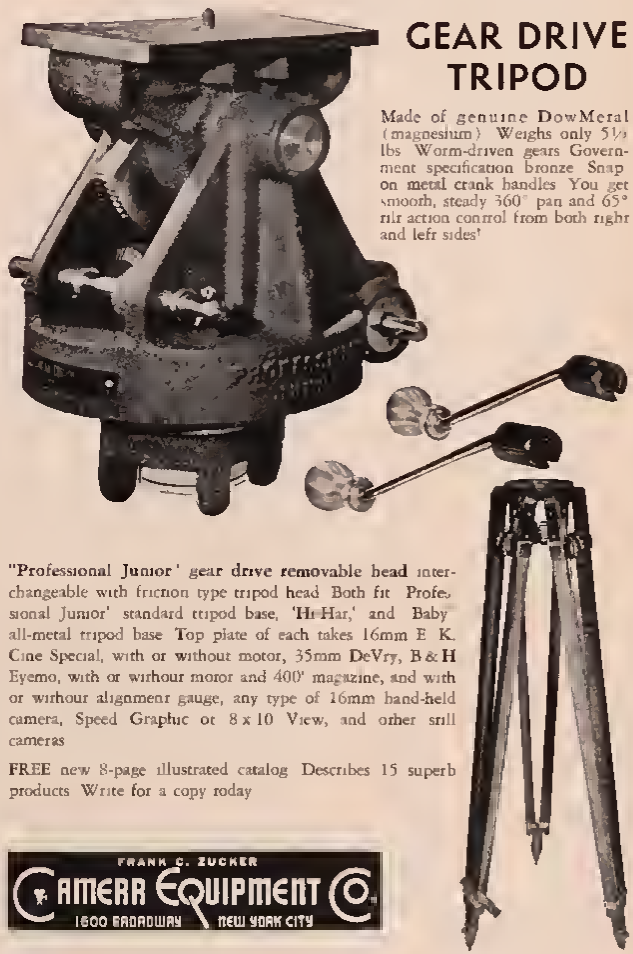

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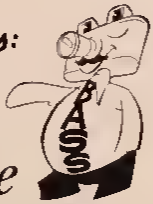

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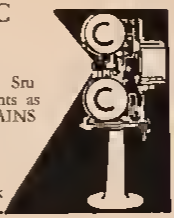

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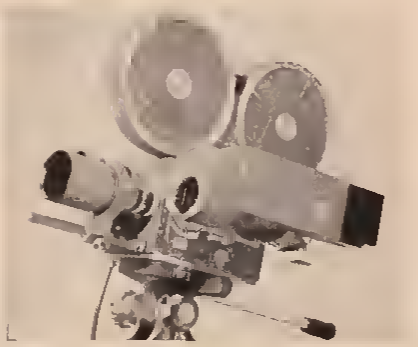

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Advantages of Lens Hood or Sunshade

A lens hood or sunshade is a box like or tubular apparatus, which is attached to the lens —sometimes with clamps, or sometimes it is supported on a special bracket fastened either to the camera or to the tripod The rear of the hood may be slotted, so that filters can be inserted

To prevent stray light from reaching the lens is the average filmer's conception of the use of a lens hood. Many also think that a lens hood is unnecessary except when shooting into the sun A very simple test will prove this mistake Make an exposure with your lens pointed away from the sun, then without altering the camera position, make another exposure of the same subject with a lens hood on You will find that the hooded shot has more crispness Professional cameramen practically never make a shot without using a lens hood

There are many sizes of hoods available at the dealers if you have not already got one My own is a home made one so made that a set of filters can be used If you make your own, be sure that the inside surfaces are non-reflecting, a good flat black serving the purpose well. The length and diameter of the hood must be adjusted so that it cuts off none of the lens' proper field of view A darkening of the corners of the exposure shows that the hood must be shortened or the diameter made larger

When glass filters are used, a hood is practically essential This is because of the additional glass surfaces which help to reflect stray light to the film

More than ever is a deep lens hood necessary when shooting against the low, slanting rays of the evening sun It is easy to determine whether the hood is adequate by looking to see how far in the sunlight penetrates The top part of the hood throws a distinct shadow on the lower part and this shadow must completely cover all the glass of the lens It is too risky to assume that one is safe just because the sun cannot be seen in the viewfinder Many cameras have "cheated" viewfinders, such that a little more is photographed at the top of the frame than is seen, and in such cases the sun would strike the lens and spoil the shot

Furthermore, when a wide-angle lens is used an additional margin of safety should be allowed, because these lenses are rather liable to flare, therefore, keep the shadow well over the lens glass With flare the resulting picture is distinguished by a pale circular area in the center of the exposure If no lens hood of adequate depth is available, other means—such as holding up a piece of cardboard or getting someone to stand in a suitable position—should be found to cast a shadow over the lens

The effect on the brilliancy and contrast of the resulting film is most marked when a good lens hood is used, so much so that when you discover its advantage you will use one on every shot you make

New Sprocket Guards On B&H 16 MM Projectors

Newly-designed sprocket guards, now standard equipment on Bell & Howell 16 mm Filmo projectors, prevent even defective film from jumping sprockets during running of film, according to announcement by the company

PROFITABLE BUSINESS DEVELOPS FROM 16MM. MOVIE HOBBY

IT has been stressed on numerous occasions, that the hobby of motion picture photography can be developed into a most profitable enterprise—if—after the fundamental initial novice photography of scenic landscapes, animals, trees clouds, etc, is successfully hurdled for the filming of more serious and advance-prepared scripts

With that preamble it brings up the experience of John N Ott, Jr, of Chicago An officer with the First National Bank of that city, he started two decades ago experimenting with time lapse motion picture photography as a hobby He specialized on flower blossoms, using a 16 mm camera in his work and made individual frame exposures at regular intervals Result was a film record of the entire growth of a plant or flower—greatly speeded up for study on runoff of only a relatively few feet of film

The time-lapse idea was not new in motion picture photography—it had been done innumerable times But Ott was not satisfied with the routine procedure, and decided to plow new ground in his experiments Starting with one camera which he trained on individual blossoms he has expanded to opetation of a scientifically controlled home studio in which anywhere from six to a dozen Bell & Howell Filmo model 70 16 mm cameras may be used in recording various biological or horticultural developments simultaneously

Ott has devised elaborate electrical and mechanical means for making the individual cameras move and operate exactly as they must to obtain the required results Pulleys are used ingeniously for example, in plant-growth setups for moving the camera backward to include a wider angle as a plant grows taller Rate of backward motion must coincide, naturally, with the rapidity of the plant s growth

Lighting Procedure

Since the plants require daylight for normal growth, but must be photographed under constant lighting conditions day and night, Ott has devised a roof shutter and a bank of No 2 photoflood lights which operate automatically when any of the cameras are required to go into action In this manner, the growth-producing daylight is shut off from the plants in the daytime only for the brief moments when the lights are lit for a separate exposure

A solenoid on each camera regulates camera mechanism lights, and shutter Netve center of all these contrivances is an elaborate setup of switch panels and controls hooked up to a 24-hour time control clock

Delayed Recognition

After eventually realizing that his motion picture hobby had plowed new fields in the time-lapse photography of plans and flowers, Ott decided to share his experience and results with other amateur movie enthusiasts in the midwest Snubbed by professional lecture bureaus just a year ago, he offered talks and film demonstrations under his own name, and was quickly deluged with bookings from schools, garden clubs, and other groups for lectures and film showings The bookings became so great that he utilized three weeks of his annual vacation early this year for 24 talks and film exhibitions embracing district between Chicago and Florida. On many occasions he hopped off via plane from Chicago to give

John Ott, Jr., with his cameras and lights for making time-lapse pictures of flowers and horticultural developments

in evenings talk at a midwestern city, and be back at the bank the following morning

This rather slow recognition of his achievements, however, eventuated in growing inquiries from business firms and chemical companies vitally interested in various phases of horticulture, weed-killers, and plant nourishers Assignments for specific research work via cinematography came so fast that Ott was forced to incorporate his original movie hobby for tax and business purposes

Hobby to Business

Ott s forced transformation of a hobby to a business with unlimited potentialities, is ably summed up in an article published in Business Week magazine, issue of June 21 1947 One of his lecture pictures, the article stated, resulted in approach by a large firm making weed-killers requesting Ott to make five separate films Another firm wants movies of root development—visual progress of root growth underground—and discovered that Ott had already devised a growing box with glass front sloping inward When the roots reach the glass plate, they grow along it to allow for minute study visually

A growing list of chemical, fertilizer, and farm machinery companies are now in constant conference with Ott on the production of time-lapse films that will enable them to study various developments for the benefit of their research scientists and laboratories, Business Week disclosed, continuing that Ott has just signed a three-year exclusive contract with Films, Inc, distributors of educational films, whereby he will produce one subject a month during the period

Project of Major Proportions

With all of his commercial commitments, Ott was forced to move from his original hobby spot in the basement to a laboratory especially constructed adjoining his home He has at present, one full-time assistant, and another who works part time

Photographic apparatus includes the dozen 16 mm H & H cameras, lighting equipment and microscopic attachments and electrical controls, which have been devised to do the major portion of the work required for the time-lapse filming

This includes automatic switching of lights on for each exposure at determined intervals, snapping of each individual film frame, excluding daylight when each picture is recorded, waters the plants periodically, and automatically adjusts the camera distance as the plant grows in height Intervals of time lapse between pictures exposed can be regulared according to requirements, and set of six wall type sockets alongside each camera allows separate time-lapse intervals on their circuits Shifting exposure intervals only requires changing the plug in to proper electrical time-lapse line

Ott at this point seems well on his way to the establishment of a highly profitable and interesting enterprise—all through his concentration on a hobby, and the fortitude to progress away from the beaten path His success in that particular field of motion picture photography cannot be said to be unusual for those enthusiasts who carefully study the wide ramifications of the field, and select a target that will generate interest from firms or organizations that can utilize visual aids for their promotional or research endeavors with most profitable results

A.S.C. CLUBHOUSE MORTGAGE BURNED AT LADIES NIGHT DINNER-DANCE

Formal burning of the mortgage on the clubhouse property of the American Society of Cinematographers at Orange Drive and Franklin Avenue, Hollywood, took place in happy ceremonies on evening of September 20th, when the organization staged a special dinner-dance for members and their lady guests.

Dinner for more than 200 was served on the spacious lawn under a canopy, with special electric lights providing unusual illumination for the evening. A Mexican string orchestra provided suitable dinner music, and later moved inside to the main room of the clubhouse for the three-hour dance session and entertainment.

The mortgage-burning ceremonies—a most happy event for the members of the A.S.C.—came as a surprise to those present, especially as the property of more than an acre with its spacious clubhouse is particularly valuable and was acquired only ten years ago. Immediately following the dinner, President Leon Shamroy—flanked by Leonard Smith, John Seitz, Victor Milner and Arthur Edeson—announced that the mortgage had recently been paid off to completely clear the property. He then handed the mortgage to Phil Rosen, a founder and first president of the A.S.C., who put a match to the legal paper as a gesture of formally cancelling the mortgage.

Frederic S. Welsh has been appointed manager of the Cine Kodak sales division of Eastman Kodak Company, according to announcement by James E. McGee, general sales manager. Welsh, who joined Kodak in 1936, had been in charge of the midwest division for the sales department.

Telefilm Sets 16 MM Program For Production, Distribution

Telefilm, Inc., Hollywood service studio which has heretofore concentrated on the production and processing of non-theatrical 16 mm films, announces that it will establish a world-wide program of production and distribution of a full program of 16 mm features and shorts in color.

President Joseph A. Thomas has appointed Ira H. Simmons, veteran film distributor, to conclude contracts with franchise representatives throughout the world for the regular distribution of the features to be produced.

Among the producers lined up, Spade Cooley is slated to deliver eight features with the first being "The Silver Bandit". Frederick Feher of Films and Music, Inc., leaves immediately for Europe to produce group of operatic features in color. Ande Lamb, writer director head of Valor Productions, Inc., is to deliver six features under series title of "The Westerners". 24 musicals, shorts and featurettes will be provided by Stanley Simmons, former Paramount shorts director, and Orin Productions, headed by Al Lane, will make a series of featurettes.

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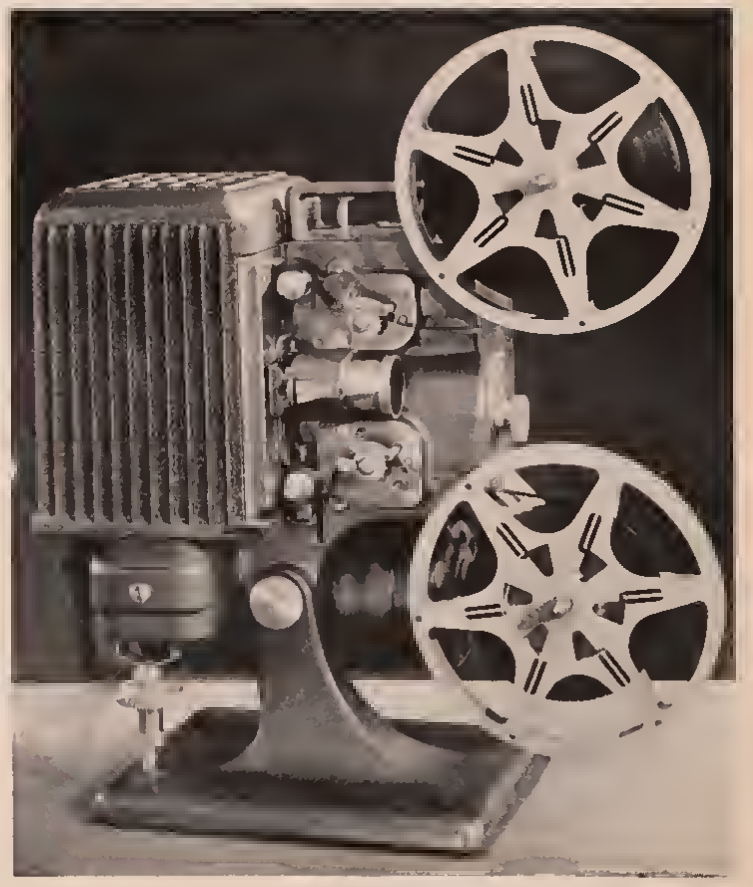

The new Kodascope Eight-90 deluxe 8 mm. projector—smartly styled—now available through all Kodak dealers.

Day at Disney's

(Continued from Page 355)

weather passage, is the Inking and Painting Building, from which branch the Paint Laboratory and Process Laboratory From the Inking and Painting Building the production flow line continues smoothly past a checking unit into the Camera Building and then on to the Cutting Building, which represents the end of the assembly line

Three large recording stages are provided one for orchestra, one for dialogue, and a third for sound effects These stages together with a theatre, are arranged so that they are handy to both the Animation Building and the Cutting Building Several large live action sound stages are provided for shooting special sequences

The furniture in all of the buildings was especially designed to meet the needs of cartoon personnel, and is unlike any standard equipment available on the market Completely modern and streamlined it was developed according to the results of a careful study of the work habits of directors, animators and background artists Thus, there are huge oversize desks on which directors can lay out a score or more of scenic designs in sequence There are chairs designed to favor an animator's working posture without causing fatigue There are drawing board desks with tops adjustable to any angle which suits the individual background artist

The interior *decor* of the buildings was designed to create a soothing atmosphere Carpets, drapes and wall tones are of harmonizing pastel shades, guaranteed not to jangle the nerves of high strung artists The walls and ceilings of the rooms are finished with acoustic plaster to deaden noise, and even the light switches on the walls are of a new silent type The whole affair is kept at the most comfortable level of temperature and humidity by the latest type of air-conditioning equipment

Cleanliness is of utmost importance in cartoon production, since tiny specks of dust clinging to the individual "cells" are magnified thousands of times on the screen The cells entering the Camera Building from the Inking and Painting Department first pass through a special cell-cleaning room where they are treated to discharge the static electricity which tends to attract dust

Men and materials entering the Camera Building pass through a special de-dusting chamber where they are exposed to air blasts from twenty separate nozzles, which remove the dust and lint picked up outside

The Sound and the Fury

In planning the new studios, it was decided to combine the sound recording facilities with a modernistic theatre that would serve as a reviewing projection room, besides providing an ideal set-up for re-recording music, dialogue and sound effects onto final master tracks

The result is a 622 seat ultra-modern theatre of concrete and wood construction complete with the finest recording and projection equipment In the center of the auditorium is a multiple channel console with mixing panels and volume indicators This console is so constructed as not to interfere with visibility from any seat in the house, and yet give the sound mixers an opportunity to sit in the center of the theatre and listen to the sound as it will later be projected to audiences in crowded theatres Specially treated walls account for the difference in acoustic reverbration between an empty and a full theatre

A beautiful cafeteria style restaurant was built to accommodate 400 employees at a time It has a strikingly modernistic dining room and a superbly equipped kitchen which turns out excellent food at moderate cost. In order to keep the prices of food low for the employees, the studio absorbs the bulk of the expense of running the commissary

When Walt Disney walks into this pleasant dining room picks up his tray, and takes his place in line to make his selection, he is greeted with hearty cries of 'Hi, Walt!' from every corner of the room

Plans for the comfort and recreation of employees were a prime consideration in designing the new studios, since drawing and writing are sedentary occupations which demand relief in the form of playful relaxation Facilities were provided for exercise sports and other forms of physical conditioning A fully equipped gymnasium, sun deck, steam and massage room and dining rooms operated as a private club were built on the top floor of the Animation Building for the masculine element For those who prefer outdoor sports, there is a baseball diamond, ping pong tables, and a putting green The park-like lawn areas between the buildings are ideal for promenading and picnicking

All in all, this magic city is an artist's heaven—a world apart, where unreality becomes the reality of the moment, and where a symphony of sound, color and celluloid is born

NEXT ISSUE Part II— *How a Cartoon Is Made*

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25 YEARS AGO
With A.S.C. and Members

• At annual membership meeting of the A S C, board of governers was elected comprising John Arnold, H Lyman Broening, Gaetano T Gaudio, Frank B Good, Fred W Jackman, John Leezer, Victor Milner, Philip E Rosen, Homer A Scott, John F Seitz, James C Van Trees, Gilbert Warrenton Philip H Whitman, and L Guy Wilky Jackman was re-elected president, with Wilky, Milner and Warrenton first, second and third vice presidents respectively Jackson Rose was elected as treasurer for the year, with Whitman functioning as secretary

• Herford Times Cowling, A S C, described the filming of a fight between two beta fish of Siam, disclosing that such fish fights in small bowls were a top sport of the Siamese natives

• Reports from Germany stated that a film had been made explaining the Einstein theory of relativity Professor Nicolai wrote the script and produced the 6,500 foot picture with the cooperation of Einstein

• National Non Theatrical Motion Pictures, Inc was sending a motion picture expedition to Egypt and the Holy Land to produce a series of biblical and historical films for bookings in schools and churches

• John Leezer, A S C, provided an article predicting early acceptance of motion pictures as an important factor in classroom instruction, and suggested establishment of a normal school for visual education teachers (His prediction is finally coming true—but 25 years later when the economy and easy operation of 16 mm projectors for classroom showings accentuates the plan)

• C Francis Jenkins detailed his research and development of high speed photography whereby he was able to photograph at the rate of 100,000 pictures per minute—with maximum of 400 feet of film run through the camera at exposure rate of 1,600 frames per second He predicted that a camera could eventually be constructed to expose at the rate of 3,500 frames per second

• Walter Lundin, A S C, just completed the photography of Harold Lloyd s starrer, "Grandma's Boy "

• Georges Benoit, A S C was retained by Richard Walton Tully to handle the camera work on ' Omar the Tentmaker," which starred Guy Bates Post

• Joseph A Dubray, A S C, was married to Grace Turner, and the couple immediately left for honeymoon in northern California.

• George Barnes, A.S C, purchased one of the new Mitchell cameras, and used it to photograph King Vidor features

• Paul W Merrill described the largest camera in the world—to shoot the cosmos through the giant telescope at the Mt Wilson astronomical observatory—and outlined the photographic problems involved

• D W Griffith failed to give cinematography credits on main titles of Orphans of the Storm, so the American Cinematographer disclosed that Hendrick Sartov and Paul Allen provided the artistic photography for the production

• Gilbert Warrenton, A S C, left Hollywood for New York, where he was to photograph an Alice Brady starring feature under direction of Joseph Henabery

• Floyd Jackman, brother of president Fred Jackman, was elected a member of the A S C (But now Floyd is a prominent Hollywood dentist)

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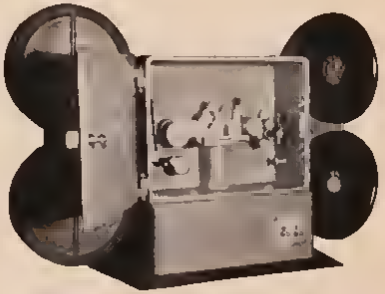

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New Exposure Meter Developed by G. E.

A new photoelectric type exposure meter, designed from the ground up for amateur and professional photographers, has been announced by the Meter and Instrument Division of the General Electric Company

Actually a meter with a 'memory,' this new unit contains a pointer-locking mechanism which "remembers" the light seen by the photocell A trident analyzer is also included in this design for analyzing and studying photographic scenes to secure maximum accuracy in exposure An automatic louver-coupled dial shifts the range of this meter from dim to bright light or back again, depending upon the scene requirement.

Light in weight, the magnetically-shielded unit is small and thin enough to fit in a vest pocket It has a sensitivity range of from 0 4 to 4100 candles per square foot—corresponding to the light from one small candle to that of the brightest sunlight The measuring accuracy is many times greater than that required for the most exacting color photography, according to G E

A new process light sensitive hermetically-sealed cell assures the meter's long life and dependability, and tight gaskered construction keeps out moisture and dust A special alnico V magnet, a development of wartime research, provides more power with less weight in this small meter The instrument may also be used to measure incident light by means of an incident light attachment which extends the range of this unit up to 61,000 footcandles Incident light exposure may be measured directly by slipping this attachment on the meter The incident light method has been used by General Electric Company since 1937, and it has been increasing in popularity especially among the professional photographers who need to measure very accurate exposure

Directions for operating the meter may be given in three words press, set and read Press the button, set the trident in line with the pointer and read the proper exposure The meter clearly shows a complete range of combinations of f-stops and shutter speeds A unique dial construction permits the meter to be shifted for movie use, and the proper exposure is then shown for all makes of movie cameras with varying shutter angle in a complete range of motion picture camera speeds

New Filipino Studios

Movie Technical Services, Inc has been organized in Manila with initial capitalization of 500 000 pesos, and has started construction of a studio on the former site of Exotic Films New plant will provide studio and laboratory facilities for independent producers in the Philippines William H Jansen, A S C, credited with introducing modern motion picture technique in China and the Philippines, will function as chief technician for the company

Zornow Promoted by Kodak

Gerald B Zornow has been promoted by Eastman Kodak from salesman to post of assistant manager of the company's New York branch

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Reflected Light

(Continued from Page 352)

So, instead of regulation lighting, with players and sets bathed in direct light from arcs and inkies, Folsey put up large white silk sheets—projected the lights onto these sheets for reflection onto the set. As a result, the actors, their clothes, and the set were all immersed in one enveloping, soft, directional light.

Folsey states, "Results were very gratifying; I had details in my blacks far beyond what would have been obtained in the conventional manner. From that point on, I continued to use the method, as the picture lent itself particularly well for this type of photography. I found reflected light particularly beneficial for faces, and especially for players difficult to photograph with direct lighting technique."

On "If Winter Comes," reflected lighting was used in all but a few scenes where it was impractical because of special lighting effects required.

Photographer Folsey has been thinking of some sort of soft lighting for practical production over a period of ten years, hoping and trying to find a method of reducing the harshness of present direct lighting. He found the reflection method ideally suited to the requirements. Folsey points out that the idea is based on the north light source used so successfully in painters' studios, and more closely resembles the latter type of lighting than what he has so far found in his many years as a director of photography.

The principle is that of an evenly distributed soft reflected light played on the scene from reflectors rather than from a direct source. The light of a large arc is directed onto an off-set white silk sheet, which is set at the proper angle to reflect the light onto the set as desired. This method allows for light control so that the spectator feels that the light comes through the windows and doors, rather than from a source within the set itself.

Silk reflectors were used for only one reason, Folsey pointed out, and that was because such material was available. However, he stated, any white material that will reflect light can be successfully utilized. At times the silk reflectors were provided with white cardboard backings to give a greater amount of reflected light onto the set when required.

Size of the white silk reflectors used on "If Winter Comes" varied. Four big sets, two 12 by 12 feet sheets and one round silk butterfly reflector were used in addition to smaller ones to kick light into portions of the set where specifically required. Incidentally, occasionally for a definite purpose, the light was projected through the large silk rather than reflected. For closeups, Folsey used 150 ampere light source reflected from silk diffusers, in many cases only one of the latter.

Folsey, in describing his method of reflected light—which he anticipates will be developed to a high degree by A.S.C. members—cautioned that the method can only be adapted for certain productions, and there is no indication that it will become universal to replace the accepted technique of direct set lighting.

Results of motion picture photography with reflected light provides a soft, luminous quality through filtering the original light source, Folsey pointed out. Such light is not flat—it's round and rich in overall quality—and can be controlled on any black, white, or grey set, in hallways or confined quarters. He points out that a large bookstore set—with ceiling completely overhead—was shot entirely with reflected light for "If Winter Comes," and appeared so realistic that it seemed to have been actually shot in a downtown store.

As previously pointed out, reflected light interiors seem to have a more natural appearance, but of utmost importance to the photographer is the fact that actors are allowed more freedom of movement within the set. They can more readily turn from one side to another without the hazards to a cameramen attendant with such changing positions when direct lighting is employed. The photographer is always able to have a round light on the actors in any positions in a set, which does not apply with regulation lighting. This is a particular advantage when large groups of people are in a scene—but the same excellent results are obtained for single or duo groupings.

There seems to be few restrictions of movement in panning or dollying when reflected light is employed. However, there are some. A pan in a complete circle is obviously impossible, as it is always better to leave the front end of the set available for the light to be reflected from. As in most dolly shots, it becomes a matter of the photographer's ingenuity and—in some cases—the director's cooperativeness, for them to be successful. Admitting existence of a few restrictions at the moment, Folsey feels most of them can eventually be overcome.

Folsey credits adaptation of his lighting method for the production to the enthusiastic acceptance of the idea by director Victor Saville, and the latter's cooperation during production of the picture.

After completing "If Winter Comes," Folsey was assigned to photograph a Technicolor trailer for "Piccadilly Incident," which Herbert Wilcox produced in England with Anna Neagle starred, and which Metro Goldwyn-Mayer will release in the United States. Folsey shot the trailer with reflected light and Wilcox was both delighted and enthusiastic with the method and results.

John Arnold, head of the Metro Goldwyn Mayer Camera department, describes the effect of reflected lighting as "comparable to the latest practices in flourescent lighting."

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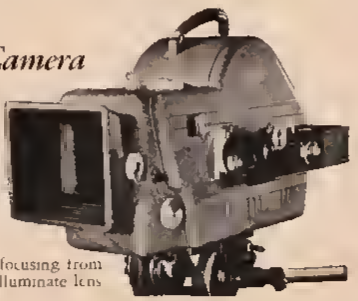

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Current Assignments of A.S.C. Members

MEMBERS of the American Cinematographers were engaged as Directors of Photography in the Hollywood studios during September as follows

Columbia

• Ira Morgan, "Mary Lou," with Frankie Carle and orchestra, Robert Lowery, Joan Barton, Glenda Farrell, Thelma White

• Fred Jackman, Jr., "Coroner Creek," (Cinecolor) with Randolph Scott, Marguerite Chapman, Edgar Buchanan, Sally Eilers

• Allen Siegler, "The Wreck of the Hesperus," with Willard Parker, Patricia White

• Vincent Farrar, "Blondie's Night Out," with Penny Singleton, Arthur Lake

• William Snyder, "The Return of October," with Glenn Ford

• Ira Morgan, "West of Sonora," with Charles Starrett, Smiley Burnette

• Henry Freulich, "The Woman From Tangier," with Adele Jergens, Stephen Dunne

Eagle-Lion

• John W. Boyle, "Northwest Stampede," (Cinecolor) with Joan Leslie, James Craig, Jack Oakie, Chill Wills

Metro-Goldwyn-Mayer

• Robert Planck, "Luxury Liner," (Technicolor) with George Brent, Frances Gifford, Jane Powell, Lauritz Melchior, Xavier Cugat

• Hal Rosson, "Homecoming," with Clark Gable, Lana Turner, John Hodiak, Anne Baxter, Cameron Mitchell

• Charles Schoenbaum, "Hills of Home," with Edmund Gwenn, Janet Leigh, Tom Drake, Donald Crisp, Reginald Owen, Rhys Williams, Lassie

• Joseph Ruttenberg, "B F's Daughter," with Barbara Stanwyck, Van Heflin, Richard Hart, Charles Coburn, Keenan Wynn, Spring Byington, Margaret Lindsay

Monogram

• L. W. O'Connell, "Jiggs and Maggie in Society," with Joe Yule, Rennie Riano, Dale Carnegie

• Harry Neumann, "Panhandle," with Rod Cameron, Cathy Downs, Anne Gwynne

• William Sickner, "A Palooka Named Joe," with Leon Errol, Joe Kirkwood, Jr., Elyse Knox

• Mack Stengler, "The Old Gray Mayor," with Freddie Stewart, June Preisser

Paramount

• Ray Rennahan, "The Paleface" (Technicolor) with Bob Hope, Jane Russell, Samuel Z. Hinds, John Litel, Jack Searl, Joseph Vitale

• John B. Seitz, "The Long Gray Line," with Alan Ladd, Donna Reed, Audie Murphy, Dick Hogan, Russell Wade

RKO

• Nick Musuraca, "I Remember Mama," with Irene Dunne, Barbara Bel Geddes, Oscar Homolka, Philip Dorn, Sir Cedric Hardwicke, Rudy Vallee, Edgar Bergen

• Robert De Grasse, "The Miracle of the Bells," (Jesse Lasky Prod.) with Fred MacMurray, Valli, Frank Sinatra

• Archie Stout, "War Party," (Argosy Pictures) with Henry Fonda, Shirley Temple, John Wayne, George O'Brien, Ward Bond, Irene Rich, John Agar, Victor McLaglen

• Harry Wild, "Station West," with Dick Powell, Jane Greer, Agnes Moorehead, Guinn Williams

• Lucien Ballard, "Berlin Express," with Merle Oberon, Robert Ryan, Charles Korvin, Paul Lukas, Robert Coote, Perer Von Zerneck

• George Barnes, "Good Sam," (Rainbow Prods.) with Gary Cooper, Ann Sheridan, Edmund Lowe

• Maury Gertsman, "Rachel," with Loretta Young, William Holden, Robert Mitchum, Gary Gray

• J. Roy Hunt, "Race Street," with George Raft, William Bendix, Marilyn Maxwell, Freddie Steele

• Joseph Valentine, "Joan," (Sierra Pictures) with Ingrid Bergman, Jose Ferrer, George Coulouris, Richard Ney, Robert Barrat, Selena Royle, Gene Lockhart

• Gregg Toland, "A Song Is Born," (Technicolor) (Samuel Goldwyn Prod.) with Danny Kaye, Virginia Mayo, Steve Cochran, Felix Bressart, J. Edward Bromberg, Hugh Herbert, O. S. Whitehead, Ludwig Stossel, Benny Goodman, Tommy Dorsey, Louis Armstrong, Lionel Hampton

Selznick

• Joe August, "Portrait of Jennie," with Jennifer Jones, Joseph Cotten, Ethel Barrymore, Cecil Kellaway, David Wayne, Albert Sharpe

Twentieth Century-Fox

• Leo Tover, "The Snake Pit," with Olivia de Havilland, Leo Genn, Mark Stevens, Celeste Holm, Minna Gombell

• Harry Jackson, "Ballad of Furnace Creek," with Victor Mature, Coleen Gray, Reginald Gardiner

• Victor Milner, "The Flaming Age," with Jeanne Crain, Dan Dailey, Barbara Lawrence

Universal-International

• William Daniels, "The Naked City," (Mark Hellinger Prod.) with Barry Fitzgerald, Howard Duff, Dorothy Hart, Don Taylor, Ann Sargent

• Russell Metty, "Mortal Coils," with Charles Boyer, Ann Blyth, Sir Cedric Hardwicke, Jessica Tandy, Nigel Bruce

• Frank Planer, "Letter From an Unknown Woman," (Rampart Prod.) with Joan Fontaine, Louis Jourdan, Mady Christians

Warners

• Carl Guthrie, "April Showers," with Jack Carson, Ann Sothern, S. Z. Sakall

• Karl Freund, "Christopher Blake," with Alexis Smith, Robert Douglas

• Robert Burks, "To the Victor," with Dennis Morgan, Viveca Lindfors, Tom D'Andrea, Victor Francen

• Ted McCord, "Johnny Belinda," with Jane Wyman, Lew Ayres, Charles Bickford

• Ernest Haller, "Winter Meeting," with Bette Davis, James Davis, Janis Paige, John Hoyt

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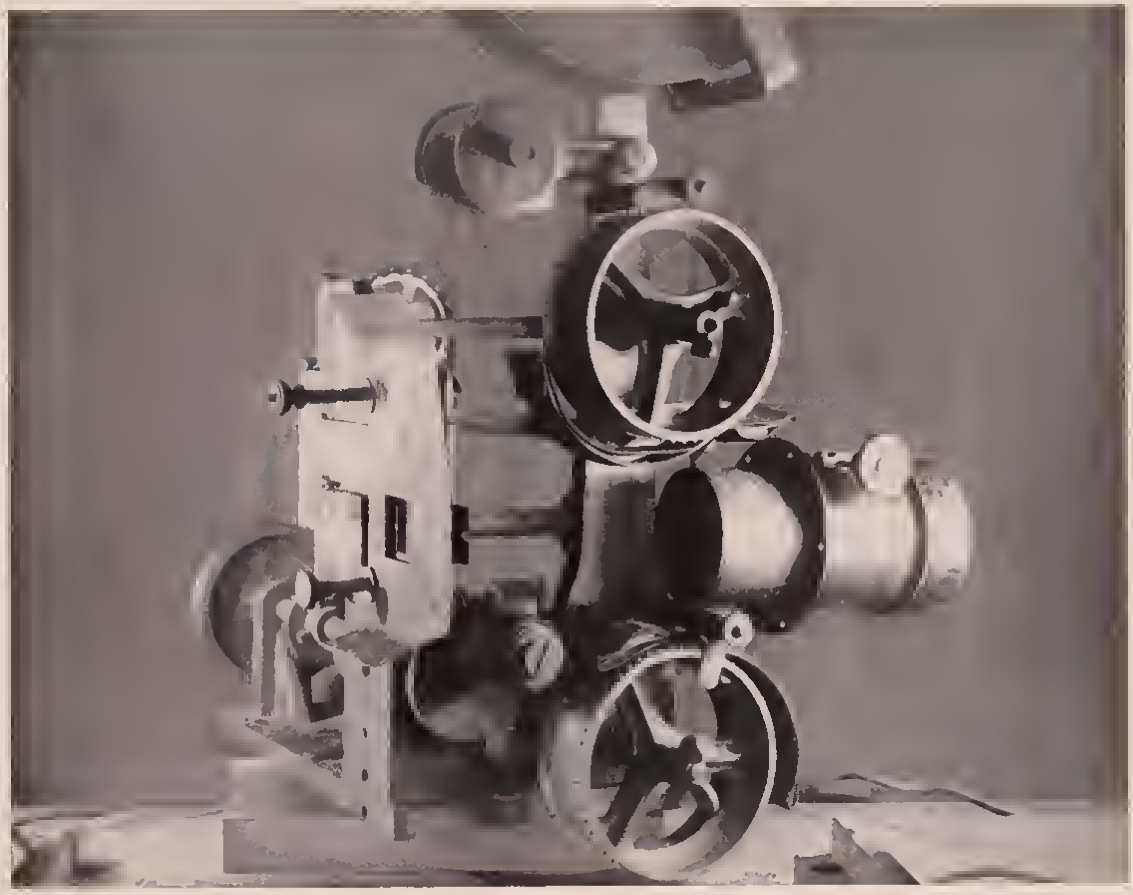

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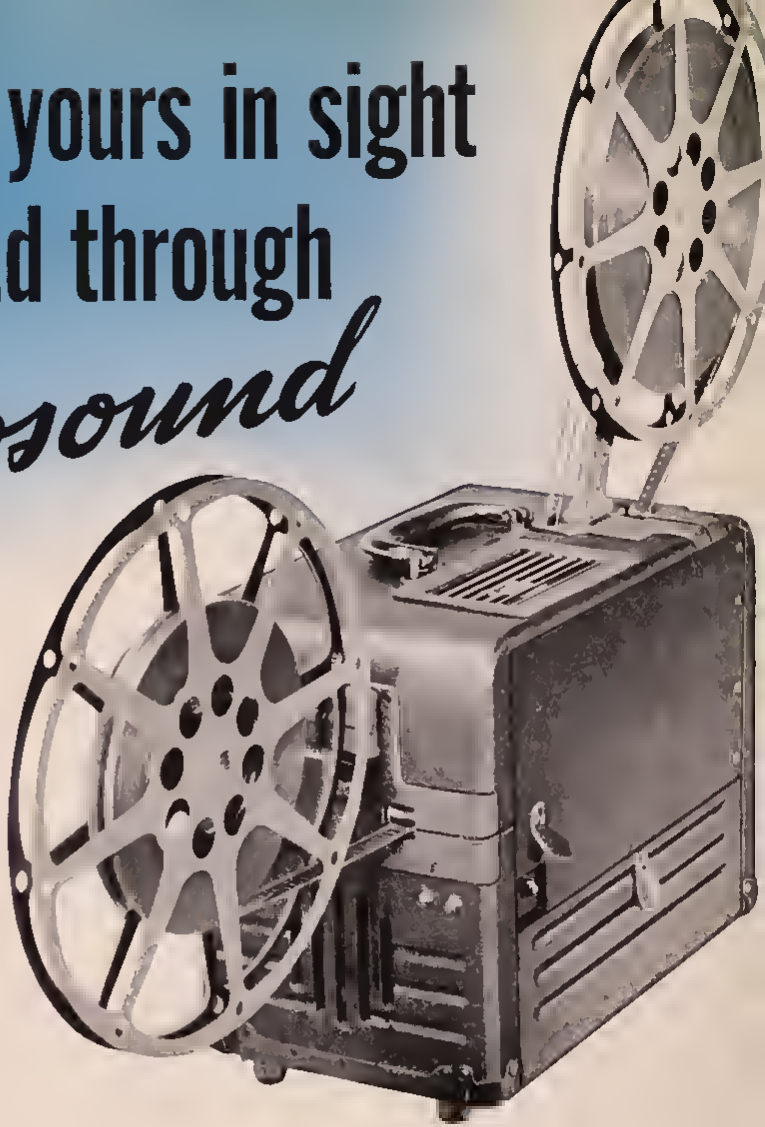

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